

SOUTHERN TEXTILE BULLETIN

VOL. 28

CHARLOTTE, N. C., THURSDAY, AUGUST 27, 1925

NUMBER 26

The Necessary Feeler For Weaving Rayon

The usual form of Filling Feeler engages the yarn on the bobbin at every second pick—always at the same place.

The constant hammering of the Feeler upon rayon or silk filling, and upon some fine cotton, results in serious damages to the yarn and bad places in the cloth.

Our new Intermittent Feeler comes in contact with the yarn on the bobbin only once in every 64 picks until one of these contacts shows that the filling has been woven off to the point where steady operation of the Feeler is necessary until the transfer is made.

The Intermittent Feeler does not bruise, chafe or cut the filling, nor mar the lustre of silk or rayon.

It is a necessity for the successful weaving of rayon.

If you are interested in saving your fine yarns and making better cloth, Let's Talk It Over.

DRAPER CORPORATION

Southern Office Atlanta Georgia

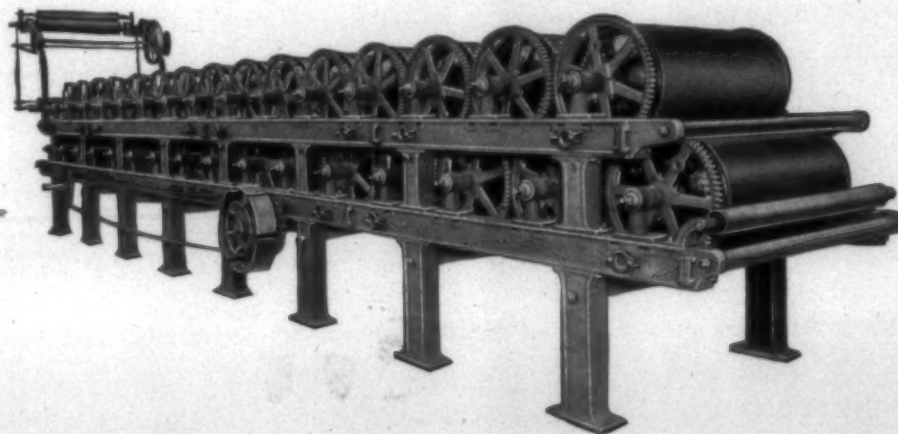
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Quality and Dependability are considerations in the purchase of new equipment. Price is secondary, but our prices are no higher because of the Quality and Dependability built into our machinery

MERCERIZING
RANGES

DYEING
RANGES



FINISHING
RANGES

AND

Machinery of
all kinds for
processing cotton
fabrics and
Warp Yarns.

The illustration shows a Horizontal Drying Machine consisting of heavy cast iron framing supporting thirty-one cylinders, which can be made of either copper or tinned steel according to requirements. Each cylinder mounted in Standard bearings and is driven by a cut cast iron gear meshing with the cylinder gear of the next cylinder making a train of gears driving all cylinders.

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Washers
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H. G. MAYER
CHARLOTTE, N. C.

Inquires both large and
small receive prompt and
careful attention.

Whitin Machine Works

Whitinsville, Mass.

August 27, 1925

Dear Mr. Mill Man:

In twenty-seven years "Jim" Cooper has made many staunch friends for himself and ourselves in our sphere of the business world, while selling and advising on Spinning, Twisting and Spooling. And real friendship is always an unspoken tribute to the fortunate possessor.

In business, friends do not result from air, hot or cold, but from "Service".

We have the friends, therefore, we must have had and do have the Service. If there is a flaw in this logic, try us out at your next opportunity. We build textile machinery for cotton, cotton waste, wool, wool waste, worsted and silk.

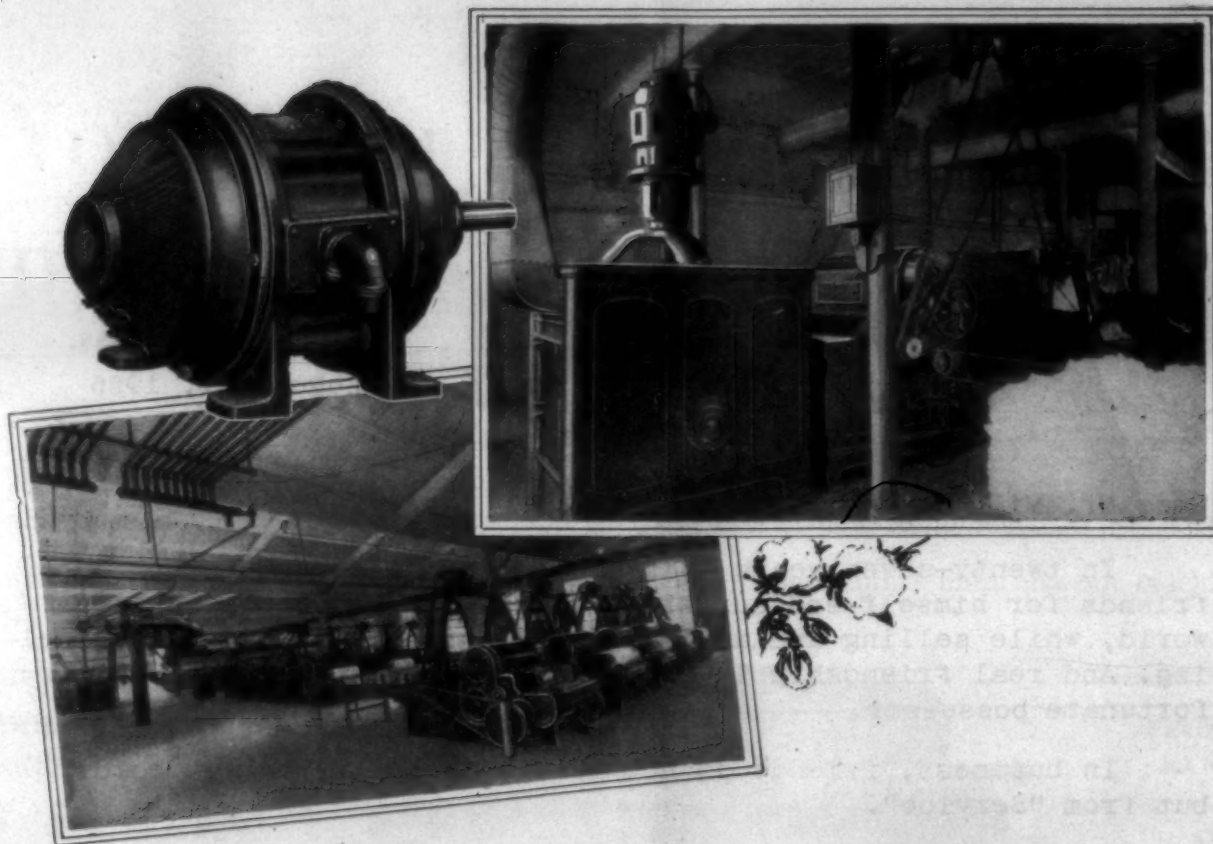
Yours sincerely,

WHITIN MACHINE WORKS



Mr. J. A. Cooper

AT
YOUR
SERVICE



Picker motors must be dust-proof

The Picker Room's lint and fly work havoc with the ordinary motor—causing operating delays and sometimes fire.

Special, protected G-E Motors are widely used for Picker drive. Waste-packed bearings keep out dirt and dust, eliminating bearing trouble and oil leakage. Screened bearing heads keep the motor clean, and still provide for its proper ventilation.

These motors are suitable for various methods of drive—with single shaft extension and one pulley for single-beater pickers; single shaft extension and two pulleys for two-beater pickers, and double shaft extension with two pulleys and three bearings where the drive comes on opposite sides of the machine.



FITTING THE MOTOR TO THE MACHINE

Each G-E Motor, instead of being a make-shift, is designed and built for the special service for which it is recommended and sold.

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN ALL LARGE CITIES



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A Single Unit of an Extensive Color Service

For the color treatment of fabrics where Sulphur Colors are required, our position is extraordinarily well founded.

This group represents a wide range of standard shades of uniform strength, gathered together through research and experiment, in response to trade demands.

Our Dyestuffs Division includes practically every variation of Sulphur, Acid, Vat, Chrome, Basic and Direct Colors, Softeners, Finishes and Sizes.

In every form of application our Laboratory personnel and equipment may be relied upon for advisory recommendation and actual conclusions. We invite inquiry of those having intricate color problems.

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GET IT FROM KLIPSTEIN }

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Announcing a New Method of Producing Bleach Liquors

WHEN our technical staff first attacked the problem of absorbing Liquid Chlorine to produce bleach liquors, there was available only the old-fashioned tower system. We first suggested the desirability of using the refrigerative effect caused by the vaporization of the Liquid Chlorine by means of our evaporating coil now in successful use in more than a score of paper mills and several large textile mills.

The development announced herewith has been brought about by our realization of the need for a method allowing more rapid absorption and more flexible utilization of existing bleach house equipment. The accompanying cut shows the construction of the chlorine absorber and its location in the chlorinating system. This new equipment possesses the following advantages:

Simplicity in construction and operation are secured by the fact that the vaporization of the Liquid Chlorine and its subsequent absorption by the milk of lime solution is entirely effected within the chlorine absorber. In connection with the unit batch system with the ton container as the base for the desired batch, it furnishes foolproof operation with any grade of operating labor.

Refrigerative Effect of vaporization is utilized even to better advantage than with the coil, since it is localized just where the heat of reaction of the combination of the chlorine and the lime is momentarily concentrated.

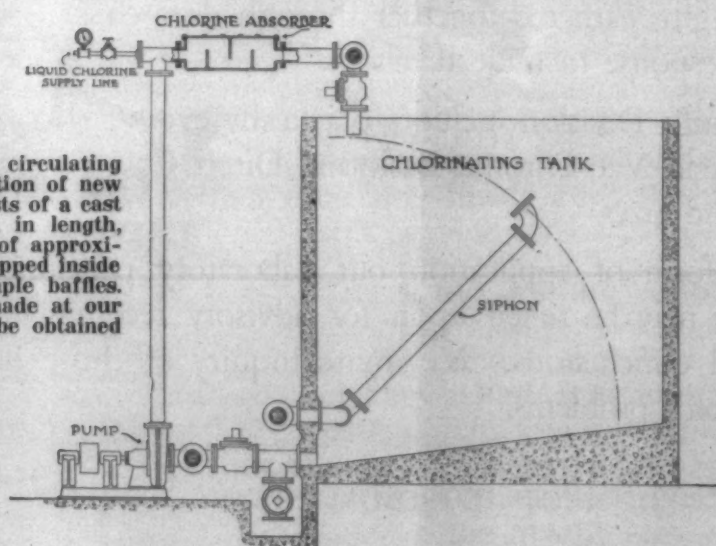
Rapidity of Absorption is such that chlorination can proceed at the rate of 2,000 pounds of chlorine per hour or better, depending on the capacity of the circulating pump. The advantage of this speed for large operations is evident.

Flexibility is a prime feature of this method, in that a single "chlorine absorber" can be used to successively chlorinate any number of tanks.

Accurate Control of the liquor, when the unit batch system is not used, is assured by the fact that liquor is available for testing at the exact point of chlorination.

Few textile mills require such rapidity of absorption as is possible by this new method. This is but one of many Mathieson developments, however, in the manufacture, transportation and use of Liquid Chlorine, all of which accrue primarily to the benefit of our customers. Because consumers appreciate this fact, the Mathieson Company is today the largest shipper of Liquid Chlorine in the United States.

Chlorinating tank and circulating system, showing location of new absorber. This consists of a cast iron box about 2 ft. in length, with a cross-section of approximately 10" x 10", equipped inside with a series of simple baffles. This equipment is made at our own plant and may be obtained direct from us.



The MATHIESON ALKALI WORKS, Inc.

250 PARK AVE.

PHILADELPHIA

CHICAGO

PROVIDENCE

NEW YORK CITY

CHARLOTTE

SOUTHERN TEXTILE BULLETIN

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VOLUME 28

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Cotton Hedging for a Gray Goods Mill

"A STUDY of Cotton Hedging for a Gray Goods Mill, is the title of a bulletin just issued by the Harvard Bureau of Business Research. This bulletin presents the results of protective hedging transactions as constructed from the actual cotton purchased and cloth orders records of a Southern gray goods mill, and from future prices on the New York Cotton Exchange. The bulletin is No. 49, and is priced at \$1.50 a copy.

The foreword by Director Melvin T. Copeland, of the Harvard Bureau of Business Research, follows:

"This bulletin presents the results of an experimental study made by the Harvard Bureau of Business Research in order to throw light on the feasibility of protective hedging by a cotton mill which manufactures gray goods.

"Wide and rapid fluctuations in the price of raw cotton during recent years have emphasized the speculative risk inherent in the ownership of this commodity. This has caused mill executives to consider whether such risks can be avoided by a consistent policy of hedging on the organized market for future contracts, in accordance with the procedure followed by some cotton merchants and by numerous grain merchants and flour mills.

Minimizing Risk by Hedging.

"Since the mill selected for this study did not actually follow a protective hedging policy, the study proceeded by constructing, on the basis of the purchase and sales records, the hedging transactions as they would have been made. The object of these computations was to determine whether the mill would have exhibited a gain or a loss on futures contracts if it had consistently hedged its purchases in the N. Y. Cotton Exchange during the period from Nov. 1, 1920, to Nov. 1, 1923. Since this period was one of generally rising prices it was to be expected that hedging transactions would result in a net loss, but that the value of cotton holdings would increase. No period of equal length has occurred showing a generally declining market and covering which, data could be secured from this mill.

"This bulletin includes an expla-

nation of the practice of hedging, a statement of the data used in the study, a description of the hedging transactions as constructed from these data, and in the results of these assumed sales and purchases of futures in accordance with a policy of protective hedging. The survey obviously has limitations in that the mill might have bought differently had a hedging policy been in force, and since the study covers only the experience of a single mill for a relatively short period of time. It is believed, nevertheless, that this experience is sufficiently typical to make a similar test covering a period of generally declining prices.

"Detailed records of cotton purchases and gray goods orders were made available by the firm operating the mill; and this firm, whose name cannot be given for obvious reasons, also provided funds to carry on this work. The study was made under the supervision of K. S. Boardman, Chief Statistician of the Bureau of Business Research.

May Be a Sound Policy.

"The gray goods mill on whose records this study is based would have shown a net loss on hedging transactions of \$486,590 on cotton purchases amounting to \$5,520,230 during the years 1921-1923, had a consistent hedging policy been in force. Approximately 90 per cent of this loss on hedging transactions would have been offset by the enhancement in value of the actual cotton holdings of the mill. This indicates that protective hedging by cotton merchants may be a sound policy. Sufficient correlation between cotton and gray cloth prices, however, does not exist to make hedging generally practicable for a gray goods manufacturer. The methods of analysis by which these conclusions were reached are explained in detail in this bulletin.

"Hedging is a term that is used loosely among cotton manufacturers to connote different types of operations on the futures market. For instance, some manufacturers have considered that the purchase of cotton on call, on the basis of a premium or discount of a future month, constitutes a hedge, since it involves the use of future quotations. Buying on call, however, is not genuine hedging.

"In this study, protective hedging from the standpoint of the mill covers the same type of transactions as ordinarily used by cotton merchants and by flour milling companies in their hedging operations. This means the use of an active futures contract market simultaneously with actual transactions in cotton and gray goods. The method, in brief, consists of simultaneous, opposite transactions in actual cotton or gray goods and in futures contracts. At exactly the time when cotton is purchased, futures contracts are sold, thus opening a hedge; and as rapidly as orders for cloth are received futures contracts are purchased for equivalent quantities of raw cotton, thus closing the hedge.

Explains Hedging Process.

"The purpose of hedging, as generally understood, is to avoid the speculative risks inherent in those raw commodity markets to which this form of trading is adapted. Because of the correspondence of actual raw commodity prices and futures contract prices, it customarily is expected, if protective hedging is practical, that speculative gains on the actual commodity will be offset by losses incurred on the futures contracts, but that speculative losses in the actual commodity will be counterbalanced by the profits made on futures contracts.

"If the market were not disturbed by adverse factors, the differential between the futures price and the spot price customarily would represent the amount necessary to cover carrying charges until the month of delivery. Supposedly, also, the possibility of buying spot cotton, storing it, and delivering it on a future contract normally would prevent the price of futures from exceeding the spot price by more than the amount of the carrying charges. The differential, therefore, between spot and futures prices normally would tend to be constant. Disturbing maladjustments do occur occasionally, in fact, between spot and futures prices, but an analysis of that problem is necessarily outside the scope of this study.

Exemplifying the Principle.

"The principle of protective hedging is well exemplified in the practice of flour milling companies and

it is from this field that the following two companies are drawn:

Assume: 2,000 barrels of flour sold when cash wheat is \$1.25; futures for 10,000 bushels purchased at \$1.26 to protect sale.

(2,000 x 5 bushels equals 10,000 bushels.)

Now, if the cash price rises to \$1.40 and the future to \$1.41, at the time the miller buys the cash grain and sells the future, the profit on the option just offsets the loss on the unfilled order, as is shown below:

Future Contract:	
Sold 10,000 bu. at \$1.41	\$14,100
Purchased 10,000 bu. at \$1.26	12,000
Profit on future contract	\$ 1,500
Unfilled Order:	
Cost of 10,000 bu. of wheat at \$1.40	\$14,000
Estimated cost of 10,000 bu. when sale was made, on \$1.25 price basis	12,500

Loss on unfilled order \$ 1,500

If the price of wheat had dropped 15 cents to \$1.10 cash and \$1.11 future, there would have been a profit of \$1,500 on the unfilled order, which would have been counterbalanced by a \$1,500 loss on the future contract. If the miller had not hedged by purchasing the future he would have made a speculative profit of \$1,500. He is, however, willing to sacrifice this possible speculative profit in order to insure the normal return for his milling service.

"In the foregoing case the miller sold flour before the wheat was on hand from which this flour eventually was made. The reverse of this situation is illustrated by the following example:

Assume: 10,000 bushels of cash wheat purchased at \$1.25. No flour sales made.

The miller will protect himself by selling futures at \$1.26. If cash wheat falls to \$1.10 before the flour is sold, there will be a loss of 15 cents a bushel on the wheat. There will, however, be a counterbalancing profit in the future trade, since the future price will have dropped approximately 15 cents also, or to \$1.11.

(Continued on Page 26)

The Work of the Bleacher

THE procedure followed now in bleaching of cotton fabrics marks a real advance during the last few years, mainly, in general, with regard to the mechanical side of the work. The opportunities arising, even in a moderately-sized bleachworks concerned solely with the production of market whites on varied classes of cotton fabrics, for attention to the mechanical side are almost as innumerable as the different classes of cloth nowadays sent to the bleachworks for treatment. The continually increasing production of mixed fabrics of cotton and artificial silk is a change which in itself has demanded the introduction of special forms of treatment, again principally in the means of manipulation to be followed in the course of bleaching these special fabrics.

Apart, however, from this particular instance of adaptability that has been called for, and reasonably well met, bleachers have had to consider also the general run of work. Broadly, bleaching for the production of a market-white on grey cotton cloths may be divided into two major classes—one class of bleaching is especially concerned in treating appropriate fabrics so as to facilitate the ultimate production of beetle and calender finishes, and the other is concerned in preserving the colors in colored striped shirtings and other partly colored fabrics, such as handkerchiefs, towelings, nainsooks, and dhooties, while converting the grey portions of these fabrics to a clear white that will not turn yellow after storage for a fairly prolonged period.

Co-Operation.

In the production of these colored

fabrics intended for bleaching there is, unfortunately, still a lack of satisfactory co-operation between the manufacturer of the cloth and the bleacher, with the result that confusion arises on occasions as to the precise definition of the term "bleaching colors." There is only a very limited number of coloring matters available that will give on cotton colors that will withstand the first-named class of bleaching, and those that are known to give satisfactory results when employed for the coloring of fabrics to be bleached by the second-named class are at times used, with consequent trouble, for the coloring of fabrics required to be bleached and given a beetle or calender finish. The remedy there need not be far to seek. Bleaching embodies an extensive series of operations, since the treatment aims at effecting the removal from the cotton fibre itself of the waxes, discoloring matters, and other bodies natural to the raw cotton, besides the several starchy and mineral compounds that are applied to the yarn for the purpose of assisting the weaving.

The foreign matter so added to the raw cotton amounts as a rule to about 10 per cent of the weight of the cloth as it leaves the loom, and in some instances, though these are not numerous, to as much as 20 per cent. A ton of grey cotton cloth may contain from 2 cwt. to 4 cwt. of extraneous matter, and that proportion has to be effectively cleared from the fabrics by the bleaching process.

In many instances this clearing takes the form of an extensive series of operations which may be

briefly outlined in sequence as follows:

1. Impregnating with milk-of-lime.
2. Boiling in lime-kier for 10 hours.
3. Washing.
4. Boiling in soda-kier for 10 hours.
5. Washing.
6. Souring with hydrochloric acid.
7. Washing.
8. Boiling in soda-kier for 10 hours.
9. Washing.
10. Chemicking.
11. Washing.
12. Souring.
13. Washing.
14. Boiling in soda-kier for 10 hours.
15. Washing.
16. Chemicking.
17. Washing.
18. Souring.
19. Washing in readiness for finishing.

These details afford an idea of the wide scope of the bleacher's work and of the opportunities that are created for attention to the mechanical side.

More attention is now paid also to the provision of better ways and means of securing, both by mechanical and chemical means, an adequately purified water before it pours into the crofts. From what has been stated it may be gathered that bleachers collectively have so put their works in order as to be quite capable of not only maintaining the century-old prestige of British bleaching establishments in the markets of the world, but of being properly equipped for satisfying all the new requirements of the world's

markets, both in quality of finished product and in economical production. From the bleacher's point of view, they could be helped towards the attainment of higher ideals yet to the mutual advantage of all concerned, merchants, manufacturers, and bleachers, if those sections concerned with providing the fabrics intended for treatment by the bleacher would take to heart and act more upon the teaching of the truism that prevention is better than cure.

Preventive Measures.

Preventive measures directed against the inclusion of magnesium and zinc chlorides in the size mixture applied to warps, against the use of paraffin wax and other difficultly saponifiable waxes, and against the production of oil-stains on the cloth, would all contribute towards avoiding breaks in the continuous treatment of the cloth during the course of bleaching. Most weaves are fully alive to the need of the application of these preventive measures, and many of them act accordingly. It comes into notice at times, however, that weavers generally seem to have acquired the unfortunate habit of aiming most strenuously at the attainment from their looms of yardage rather than weight, as formerly. The extra tension needed to get the result sought involves more pressure on the draw roller and more pull sideways by the templates of the loom, both causing faults in the cloth before it reaches the bleacher.

It need only be pointed out that the bleacher is generally expected to deliver 5 per cent more yardage in the finished product than the

(Continued on Page 32)

VICTOR MILL STARCH — The Weaver's Friend



It boils thin, penetrates the warps and carries the weight into cloth. It means good running work, satisfied help and one hundred per cent production.

We are in a position now to offer prompt shipments.

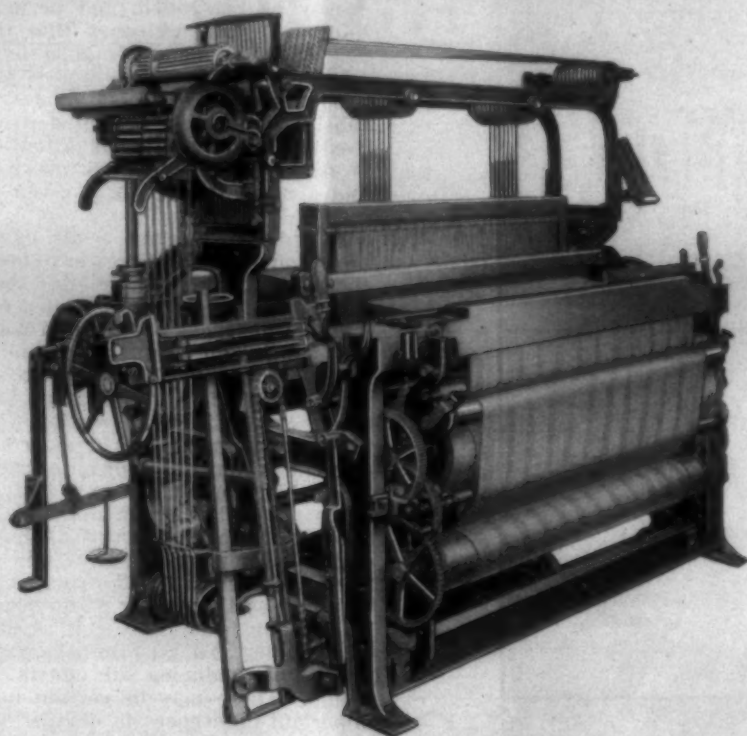
THE KEEVER STARCH COMPANY

COLUMBUS, OHIO

DANIEL H. WALLACE, Southern Agent, Greenville, S. C.

C. B. ILLER, Greenville, S. C.

L. J. CASTLE, Charlotte, N. C.



Silk Looms

Our Silk Loom, with Knowles Head or Dobby, equipped with eight roller bearings on crank, bottom and rocker shaft, cut tooth driving gears and shock absorbing crank connectors represents the last word in silk Loom construction.

These improvements have resulted in a gratifying amount of business from all progressive silk manufacturers.

CROMPTON & KNOWLES LOOM WORKS
WORCESTER, MASS.

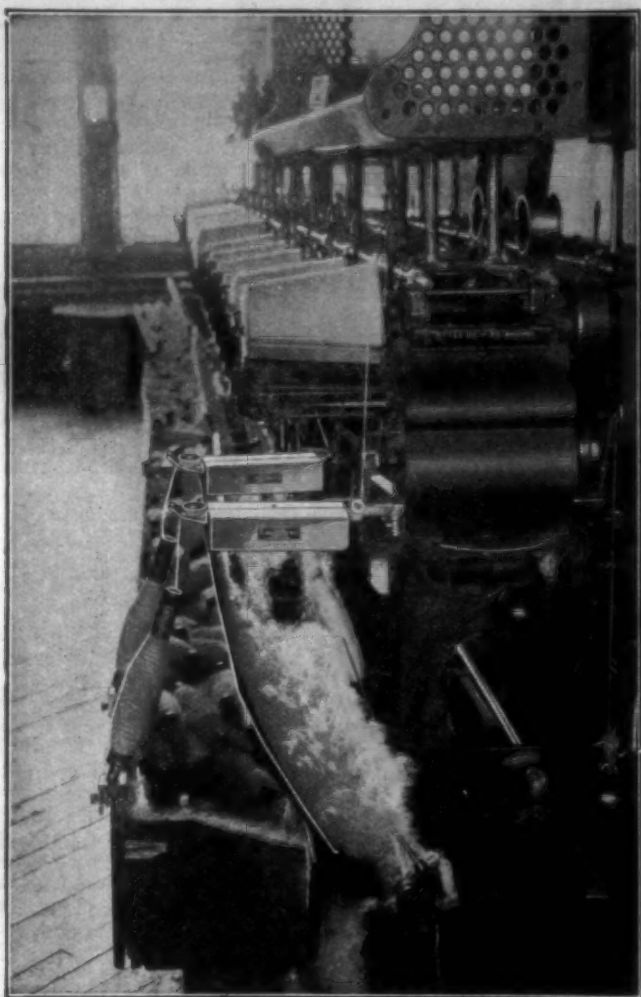
PROVIDENCE, R.I.

PHILADELPHIA, PA.

PATERSON, N. J.

S. B. Alexander, Southern Manager, Charlotte, N. C.

Cotton Goods With Silk Effect



The Truth About Slubs

It does not require inventions to make slubs, but often they are made, and that is another story.

We wish to tell you that the Eclipse Automatic Yarn Cleaner is sure death to slubs. The Eclipse Cleaner not only catches all the slubs but thoroughly removes all the dirt in the yarn.

Many knitting mills and spinning plants realize the extreme value of the Eclipse Cleaner, and are equipping their entire winding capacity with the Eclipse Cleaners. The basic principle of good knitting and weaving is thoroughly clean yarn.

Why make yourself believe you are getting the best results when you can absolutely improve your yarn with the Eclipse Cleaner.

The Eclipse Cleaner is easily attached to your winder. It does not add any additional cost to your winding costs. Upon request we will cheerfully give you a demonstration.

Eclipse Textile Devices, Inc.
Elmira, N. Y.

Makers of

Automatic Yarn Cleaner, Automatic Stop Motion, Yarn Tension Device
Eclipse Van Ness Dyeing Machine

IN order that a technical process may be controlled, and perhaps improved, it is necessary that the principles be thoroughly understood. In the following discussion of the production of a silk effect on cotton fabrics, which is reprinted from *Textilberichte*, particular attention is paid to the principles involved and a new explanation is given of what takes place:

In order to produce a silk effect on cotton, after the fibres have been thoroughly boiled out, or after they have been dyed, they are treated for a sufficient length of time in a boiling solution of soap, which must not be too weak. Then the excess soap solution is flung off in an extractor, or, without extracting, the fibres are passed into a weak, cold, or slightly warm bath of an organic acid which does not attack cotton. After the last trace of free alkali has been removed, the yarn is thoroughly, although slightly, acidified. Then it is centrifuged again, and finally dried thoroughly and quickly at a strong heat, until it is as dry as possible. This is the standard method of producing silk effects on cotton. There may be certain unimportant differences in details.

It is generally well known that the silk effect can be produced on mercerized cotton more easily and with a more lasting effect than on unmercerized cotton. It has also been noticed that the finer grades are more readily processed than the lower grades of cotton.

Unintentional Gloss.

There are, however, quite a number of cases in which silk effects are produced on fabrics unintentionally. Under certain conditions this may be decidedly disadvantageous. This happens quite frequently in bleaching. Furthermore, it occurs at times when cotton goods are boiled, acidified, and then dried. Similarly, it is found now and then on cotton goods which are colored green during the course of the aniline black dyeing process in the oxidation to emeraldine.

If these phenomena are examined in order to establish the causes, then, at least in accordance with the observations which the writer has made up to the present time, it has been found that the production of the silk effect always happens with cotton fabrics or yarns which, for one reason or another, particularly the use of oil in spinning processes, become well smeared with grease.

On the other hand, there are cases in which only a fairly good silk effect is produced on cotton goods in spite of the greatest care and most painstaking efforts to produce the effect. Thus, for example, it is not possible to produce the silk effect on a cotton cloth dyed diamond black (aniline black); similarly not on cotton, which, after dyeing is so treated with chromium compounds that these form in a certain degree a constituent of the color which cannot be washed out.

Even when, as has been mentioned, a good effect is produced on cotton goods in the green-colored condition in dyeing by the oxidized

black method, it is greatly improved after chroming, or can be perfected by further treatment in various ways. On the other hand, if the chroming is supplanted by other operations, as, for example, treatment of the green-colored goods with soda or with a solution of potassium permanganate, then a rather poor aniline black results, but it is possible to produce the silk effect on cotton goods dyed in this manner by the use of the ordinary process.

If now the results that have been obtained by practical experience, and the observations that have been made and discussed above in respect to the production of the silk effect on cotton goods and the failures to obtain it, are carefully compared with each other, then the following conclusions may be reached: (1) The silk effect can be successfully and easily produced on cotton goods after they have been mercerized—that is, after the cellulose has been converted into the hydrated condition; (2) this effect is also obtained when the cotton cloth is treated intentionally or not, with soap, or, as in bleaching, the cotton is converted into the purest possible condition in which no oxidation at all has taken place.

On the other hand, if the cotton is chromed in such a manner that the cellulose of the cotton enters into an intimate combination with the chromium, then the silk effect cannot be produced.

Finally, it must be remarked that in dyeing with sulphur colors, which means that the cotton is subjected to a very thorough cleansing through the treatment with sulphide of soda, a very good silk effect is produced on the dyed goods.

Character of the Silk Effect.

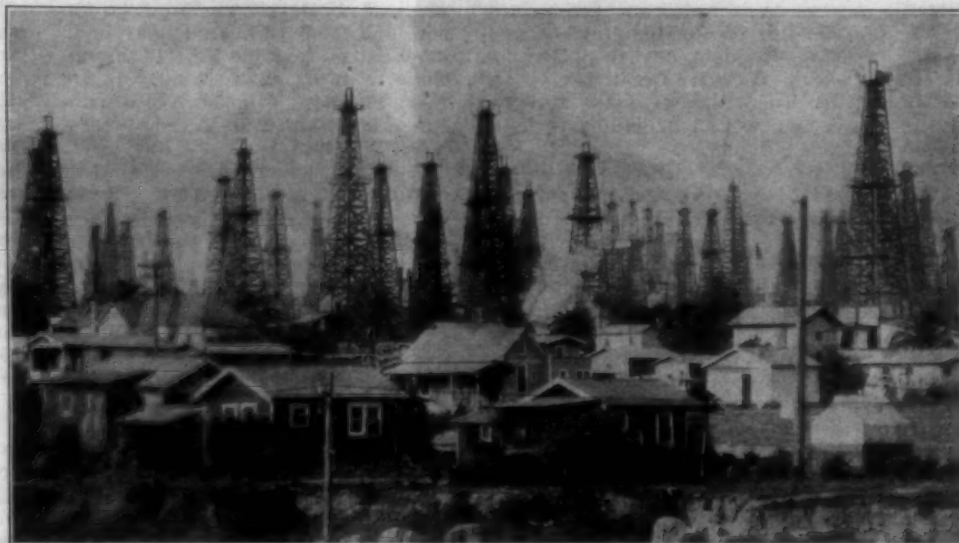
In trying to explain the nature of the silk effect on cotton goods, it was found that there was little information available. All writers seem to agree that it is caused by the rubbing together of invisible, minute crystals of fatty acids, which in the treatment of the cotton with soap and weak acid and on subsequent thorough drying become fixed to the fibres, and enter into a more or less intimate combination with them.

If this theory is correct, then every explanation that has been made of the fact that the silk effect cannot be produced on cotton goods dyed aniline black, or by the after-chrome method, cannot hold water. Furthermore, this theory does not afford any information regarding the reason why the silk effect is more pronounced the longer the cotton with the silk effect already produced in it is subjected to mechanical friction—that is, by pressing the goods in the hand.

The theory would afford much more readily an explanation why such mechanical friction would tend to reduce the degree of the effect, because this would undoubtedly serve to break up the supposed crystals of fatty acid, or, at any rate, cut off their edges and corners.

(Continued on Page 31)

HOUGHTON



About Crude Oil and Other Crude Things

Chas. E. Carpenter, Near Editor
Is Telling it.

WHEN I was out in Los Angeles a year ago, someone started the rumor that my mission was to select a site for a Pacific Coast plant for the manufacture of Houghton products. Did you ever try to count the stars in the Heavens? Well that is how many real estate men there are in Los Angeles, everyone of whom insisted that he had just the site for the purpose, in spite of my protestation that I had no such need. Finally things became so bad that I was a nuisance to the Hotel, or rather my real estate callers were, so the Manager suggested that I go to Long Beach, some 20 miles down on the coast, and forget to leave my address. I decided to motor and on my way you may be assured that I was thinking of almost any thing and everything excepting oil. Suddenly strange looking trees began to loom up in the distance, which later developed not to be trees at all, but derricks on Signal Hill. I was so astonished at the closeness of some of these wells to others that I took a fish line from one of my reels and measured them, and several were less than 20 feet from centre to centre. Then I began to realize that the real estate men

thought that I was going to locate near the source of most oil, little realizing that California crude oil does not produce one single drop of any substance that is or can be used in any Houghton Product.

Unfortunately to the average person, oil is just oil and petroleum is just petroleum. That there is more different varieties of oil than there are people, is not understood.

"A HOUGHTON NUT", is a nut which has become loose and fallen off the Houghton Automobile de luxe. Sometimes they are permanently lost and buried in the debris and sometimes they are discovered and attached to some other car, a sort of a misfit.

One of these "NUTS" is using as an argument in textile mills that, "all Houghton's Products contain mineral oils because Houghton is primarily a petroleum oil manufacturer."

Houghton was not primarily a petroleum oil house, but was established in 1865, before the manufacturer of most present day petroleum products. Houghton has never made petroleum products exclusively and has never featured petroleum products exclusively. Houghton has not now or have they had, for 25 years, any interest in any petroleum refinery.

E. F. HOUGHTON & COMPANY

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AND IN EVERY OTHER TEXTILE MANUFACTURING CENTER OF THE WORLD

Oils and Leathers for the Textile Industry

Southern Power Company Forced to Curtail

A program of curtailment of operations one day each week by more than 300 cotton mills of the two Carolinas was announced Saturday night by the Southern Power Company because the prolonged drought has compelled a sharp reduction in the electric power output of the company.

This program became effective Wednesday and will continue in effect for an indefinite period. The cotton manufacturing plants of these two States which obtain their electric power from Charlotte company were divided into five groups, and each group will suspend operations one day of each week, according to the power company's new policy.

More than 5,000,000 spindles will be affected by this curtailment. This number, operated by the mills provided power by the Southern Power Company, is about half the total spindles in the Carolinas, which have about two-thirds of the more than 17,000,000 spindles operated in the Southern States, according to officers of the power company.

Program is Stated.

Charles I. Burkholder, vice-president of the Southern Power Company, made public the text of a letter sent to all cotton mills which are supplied power by this company:

"There being no immediate prospect of relief in sight, we are forced

to ask our consumers to assist us by power curtailment as follows:

"We request all consumers to discontinue use of power for the periods outlined below except such powers as is necessary for strictly public use or for handling of perishable products, or fire protection.

Zone Are Created.

"In order that we make full use of steam, we have divided the system as follows:

"Zone No. 1—Davie, Davidson, Forsyth, Guilford, Rockingham, Alamance, Orange, and Durham Counties, N. C.

Zone No. 2—Rowan, Stanly, Cabarrus, Mecklenburg, and Union Counties, N. C., and York County, S. C.

"Zone No. 3—Gaston County, N. C.

"Zone No. 4—Rutherford, Cleveland, Lincoln, Catawba, Iredell, Caldwell and Burke Counties, N. C., Cherokee and Spartanburg Counties, S. C.

"Zone No. 5—Lancaster, Kershaw, Chester, Newberry, Laurens, Greenwood, Abbeville, Anderson, Greenville, Pickens, and Oconee Counties, S. C.

Curtailment Schedule.

"The last curtailment, which occurred two years ago, was called off after Zone No. 4 had curtailed, and we are therefore beginning this curtailment with Zone No. 5. Beginning with six A. M. Wednesday, August 26th, and until further notice, we

request that all consumers in Zone No. 5 discontinue the use of power from six A. M. Wednesday to six A. M. Thursday; Zone No. 1 to discontinue from six A. M. Thursday to six A. M. Friday; Zone No. 2 to discontinue from 12 noon Friday to 12 noon Saturday; Zone No. 3 to discontinue from six A. M. Monday to six A. M. Tuesday; Zone No. 4 to discontinue from six A. M. Tuesday to six A. M. Wednesday.

"We had hoped to forestall this curtailment until Monday, August 31st, but it is entirely impossible to do this. We assure you that it is beyond our power to prevent this curtailment and request your liberal co-operation to the end that a far more drastic curtailment may not be brought about."

Drought is Severe.

Speaking of the conditions that have brought about this acute situation and the necessity for curtailment in the use of power, Mr. Burkholder stated that "the drought since the first of February has been without precedent during the past 35 years. The company itself has maintained gauging situations in various places in the Catawba River Valley for five years and the precipitation from the first of February to the present time has been less than 45 per cent the average for the period. At the station above the company's large storage lake at Bridgewater, the usual rainfall from

February 1 to dates is 34 inches. This year it has been only twelve inches.

"How serious the effect of the drought, especially in the upper part of the Catawba watershed is, may be judged by the experience of the new 45,000 horsepower hydroelectric plant at Rhodhiss. This plant was completed and started just before March. In order to get enough water in the pond to turn the machinery, it was necessary to draw upon the storage pond at Bridgewater above. And at no time since the plant was started has the pond been anything like approximately full. The result is that this plant has turned out a very small part of the power which it would have turned out under normal stream conditions.

Steam Plants Speed Up.

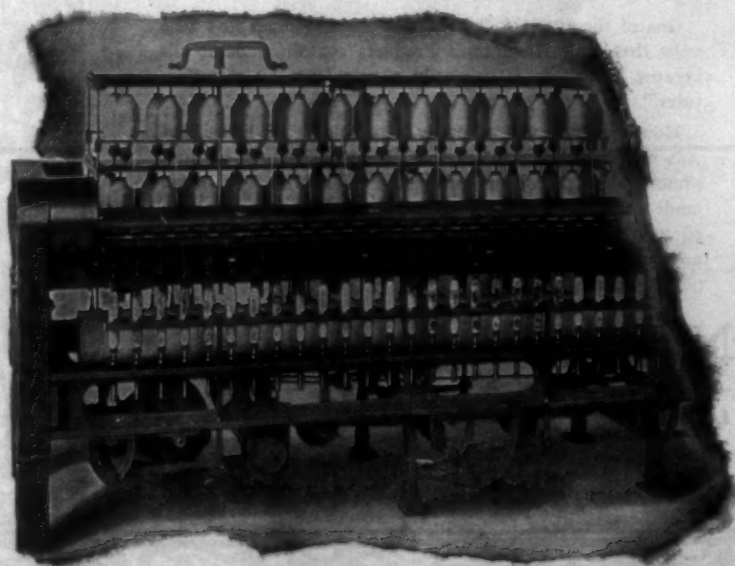
"Following its policy of building up its supply of water in storage, which each year is reserved against the dry period in late Summer, the company started up its main steam plants in February. These plants have been operating continuously day and night since that time. The first of June the two smaller steam plants were started up and they have been operating continuously day and night since that time. These plants since February 1, have consumed nearly 300,000 tons of coal and almost one-half the power pro-

(Continued on Page 32)

H. & B. AMERICAN MACHINE CO.

Pawtucket, R. I.

Southern Office: 814-816 Atlanta Trust Co. Bldg., Atlanta, Ga.



Builders of

New Pattern Spinning Frames

With Band or Tape Drive

The illustration shows the Head End Section of our New Pattern Spinning Frame, with Improved Builder and Pick Motion. Our machines are of Extra Heavy Construction to withstand high speeds without vibration, thus insuring light running and reduced cost in operation.

We build these machines in all gauges, with either Lever Weighted or Self Weighted Top Rolls.

There are many valuable features embodied in our machines that we would be glad to describe.

Illustrated Bulletin with List of Users sent on Request

COTTON MACHINERY

Termaco Profits

Greatly reduces roving waste and gives accurate check on amount produced.
Does not cut staple and shorten it; keeping it from either being thrown out by carding machines or weakening yarn.
Does not splinter bobbins but prolongs their life.
Removes waste ready for mixing with raw stock, without reworking.
Speeds production and eliminates the time lost waiting for cleaned bobbins.
Cuts down labor cost. One boy can clean upwards of 30,000 bobbins daily.
Is fool-proof. No knives or exposed moving parts to endanger a careless operator.



Puts Profits on Your Books

A Termaco, for cleaning roving bobbins, is making money for every mill where it is used.

In roving waste alone, it has saved a mill over \$1100.00 annually.

By not cutting the staple it has saved a mill over \$1700.00 annually.

Where only 75,000 bobbins a week are cleaned, it has cut the yearly bobbin cost over \$340.00.

Where operated at only about half its capacity a Termaco has repaid its cost three times a year.

Our Engineering Department will gladly figure the additional annual profits a Termaco will put on your books. Just write us "Send Termaco facts and figures."

Complete stock of parts carried for convenience of Northern mills by our New York and New England Representative, General Supply Co., Danielson, Conn.

The TERMACO

ROVING BOBBIN CLEANER

The TERRELL MACHINE COMPANY, Inc. CHARLOTTE, N.C.

Knitting Viscose Rayon

BEING a regenerated cellulose, viscose silk is comparatively easy to dye with the direct cotton colors; and, by careful selection of the dyestuffs, level shades can be obtained in mixtures. Viscose silk is stronger when dry, and slightly weaker when wet, than acetate silk. Its extensibility increases in accordance with the amount of hygroscopic moisture it contains, while its smoothness adds to its wearing properties, as it enables it to withstand friction. Its covering property, owing to its high specific gravity, is less than real silk, but is dependent to a large extent on the size of the individual filaments and the contour of the cross section. It is now possible to spin tubular filaments, which should theoretically improve the covering property, but it is difficult to control the operations, and only small amounts have been used in the knitted goods industry.

Lubrication.

Viscose silk yarns for knitting are lubricated with "lather" prior to their leaving the spinners, this lubrication taking place after the washing and bleaching; but, in many cases, the yarn is again lubricated during the winding operation. Paraffin discs are also used on the winding machines; while during the

actual knitting, the yarn may be conducted over a wick, the ends of which are immersed in olive, or Gallipoli, or even neatsfoot oil.

It has been found by experience that, although viscose silk yarns are weaker when in a wet state, it is actually beneficial to "damp" the yarns before knitting, in order to prevent "cockling." In any case, whether further lubrication is given or not, the wound packages should not be kept in places where the temperature is high, or the loss of hygroscopic moisture by evaporation will militate against the obtaining of regular fabric.

The typing of knots has always been a subject of much discussion. Strictly speaking, only "clipped"—i. e., the free ends of the yarn cut with the scissors—weavers' knots should be made, and all knots in the final winding operation on to bottle bobbins should be visible and placed below the winding traverse.

Winding.

The winding of viscose silk for purposes of knitting may be carried out either by first winding the yarn from the hank on to a flanged bobbin, and subsequently rewinding on to small bottle bobbin, or by winding directly from hank to bottle bobbin. From the spinner's point of view the first method is undoubtedly

the best, as during the second operation more tension can be applied without any danger of stretching the yarn and a firm package built up which is not likely to become damaged in transit. On the other hand, the "hank to bottle bobbin" winding machines are becoming more popular to the hosiery and knitted goods manufacturer, as they effect economy in time and space, providing they are designed to prevent undue drag or sudden jerks which weaken or break the filaments and cause trouble in the knitting. Little good will be served by debating as to the advantages of the single or dual process or the contact or non-contact machine. Each machine has its own particular features, but the ideal hank to bobbin machine has yet to be built, and after admiring the latest types of machines, it comes as an anticlimax to witness old rebushed winding machines built in the last century winding, and winding efficiently, direct from the hank with the old form of roller tension. Considering the difficulty in obtaining wound viscose yarns, cost of winding, trouble of returning bobbins, etc., it is remarkable that manufacturers still prefer to buy on the small bottle bobbins.

Contrary to the advice given to

weavers of viscose silk, it can be stated quite definitely that viscose yarns knit up much more regularly when they contain their full quota—i. e., 11 per cent—of moisture. Dry yarns cause cockling, which, however, is removed to a large extent in finishing. The secret of perfect knitting lies largely in the "condition" of the yarn, and this point has not thoroughly been investigated. Probably, however, the yarn becomes more or less permanently stretched, and being in a slightly plastic state conforms to the looping action, so that cockling is avoided.

Another fact, which is indisputable, is that the knitting of viscose yarns on the large web machines—bearded needle or latch needle—is assisted by the employment of yarn-feeding wheels. In this case, by suitable adjustment, a slight drag can be placed on the yarn between the supply wheels and the knitting zone, so that the knitting takes place under a regular tension. Indeed, quite different results can be obtained by various adjustments of the amount of yarn supplied to a definite position of the sinking of stitch cam. Even knitters who have previously decided against the use of yarn-feeding wheels for worsted and cotton yarns, are bound to ad-

(Continued on Page 26)

Remember This, Too, About SLIP-NOT

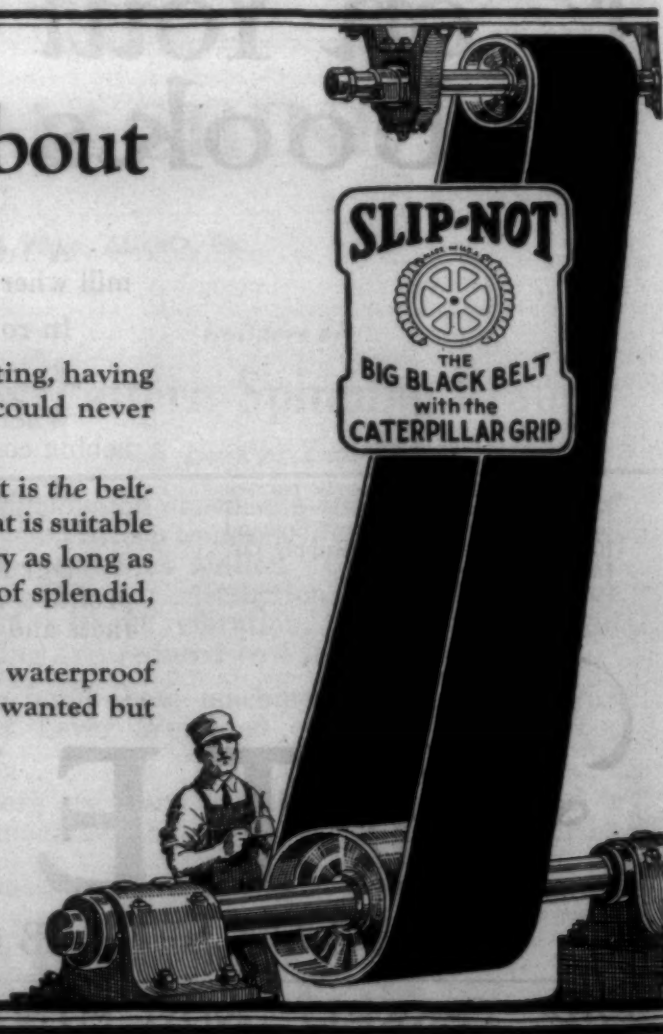
IF SLIP-NOT were just one of a number of brands of leather belting, having none of the qualities that give character and individuality, it could never enjoy the popularity that it does today.

But SLIP-NOT refuses to be classified as "just another brand." It is the belting that offers 100% pulley contact from the very day it is used; that is suitable for your most difficult drive; that assures maximum power delivery as long as it is in use; that possesses a degree of toughness that means years of splendid, uninterrupted service.

Satisfy your curiosity about SLIP-NOT. Learn why and how this waterproof belt can promise you a power transmission service you have long wanted but perhaps have never received.

A SLIP-NOT Dealer will be glad to give you full information. Or write us direct

SLIP-NOT BELTING CORPORATION
KINGSPORT, TENNESSEE



The Cotton Situation Abroad

AFTER an extensive tour through the principal cotton consuming countries in Europe, Robert Hecht, president of the International Corporation, well known cotton firm of Atlanta, outlines his ideas of the cotton situation in the following letter to the Southern Textile Bulletin:

"I returned about two weeks ago on the 'S. S. Celtic,' after an extensive trip through Europe, and I am enumerating below the various countries I visited on this trip. Germany.

"The mills have been operating practically full time and have made enormous profits during the last two years, on a gold basis, and with very few exceptions, they have put their mills, during the inflation, and at a nominal cost, in the most excellent condition; not only as far as cotton mill machinery is concerned, but also power works and vast other improvements around the mill. They have paid for this labor and material with the worthless marks, and have paid off their mortgages and old bonds in inflated money.

"The mills are now entirely on a gold basis and are worth more than during the war or before the war, as they are practically free of encumbrance to their new stockholders. They have been supplying the domestic trade, and have been getting high prices on account of the high tariffs, which are excluding textiles from other countries.

"They have no trouble in financing cotton with confirmed gold credits abroad. The mark is absolutely stable, and the only trouble at present in Germany is the general capital shortage, as a good deal of German capital is still deposited abroad, fearing a capital levy.

"The German people have not bought any cotton goods to speak of for the last eight or ten years, so it is presumed that their domestic trade will hold good awhile yet, and Germany will take at least as much cotton as last year.

"The improvements that have been made since I saw Germany three years ago are simply marvelous, and in spite of the reparations, which will be very heavy next year, with no internal debt, which has been wiped out through forced valuation of the old mark, there is prosperity ahead for Germany. The Government is stable and respected. Austria.

"The textile conditions in Austria are similar to the German conditions. The only thing is that the future of Austria is not quite as bright as the future of Germany. I feel that the course of a year will bring an approachment to the country surrounding Austria, and lower the terrible restrictions of trades between the new independent States belonging to the former empire. Italy, Belgium and France.

"These three countries are having deflation in their money, which kills thrift and savings of the people, and encourages buying of merchandise, in order to flee from the depreciated currency; but as these

people still think a franc is a franc, the labor is paid in francs, though the Government controls the necessities of life, such as housing and certain food.

"Therefore, the textile mills are getting exceedingly cheap labor and are operating full time, as they are exporting their merchandise, easily able to compete with other countries on account of the labor condition, as well as cheaper taxation. So these three countries are going to take as much cotton during the years 1925 and 1926 as before. England.

"The condition in England is very bad, on account of its gold system, which encourages laziness and inefficiency. They are suffering on a forcible revaluation of a town, which has been raised entirely too quick and is in no proportion to the living conditions in England. Loans made by industrials and others have to be paid back in gold crowns, which loans originally were made on a 35 per cent lower gold basis. There is a good deal of labor strife in England. The textile mills complain, in American language, that they are broke and being run by the banks, which dictate their policy, and the general idea in England has been to buy the bulk of the cotton on shilling basis, which is equal to 24 cents delivered their mills. This means approximately 21 to 22 cents interior shipping points here, and any serious advance would bring England out of the market, especially as they are trying in every country, whether Africa, Egypt, India, or Austria, to encourage cotton growing to get independent from the United States.

"Naturally, this may not show this year, but the course of a year will bring appreciable quantities of cotton being raised in their own colonies.

"The India crop this year has a bright outlook on account of the heavy monsoons (trade winds), which set in beautifully and gave excellent moisture to India. A crop of five and one-half to six million bales would not be surprising, and such a crop would cut down the use of American cotton not only in England, but on the continent very severely.

"The cotton crop in India is planted later than ours and is not made yet. It is really surprising that the European knows more about the cotton crop than we do. Apparently he sees from an altitude while we are standing in the plains, having a very limited horizon. We are effected by sudden small changes, such as quick rains, or a few days' hot weather, they apparently disregard these special conditions and try to get a wide view on the general condition.

"They are much better informed about export business of textiles than we are, as they are in closer contact with India and China than we seem to be, and they prefer this trade condition as a betterment than weather conditions as we do.

"The English textile industries have a lot of trouble on account of the

antagonistic movement in India, which country will buy even at higher prices from other people, as well as bad movement at present in China, which has worked against England.

"Europe expects that the world's needs are for a thirteen and one-half million bale crop to satisfy the consumption of American cotton. Anything below this figure is bullish, anything above will break the present price levels."

Urges Aid for Universal Standardizing

Houston Tex.—Arno S. Pearse, of Manchester, general secretary of the International Federation of Master Cotton Spinners, who appeared recently before the Houston Cotton Exchange urged cooperation to secure universal standards of staple and standardization of baling and tare, and protesting against the action of Texas cotton shippers in disavowing their responsibility for internal damp. Mr. Pearse is meeting with manufacturing associations, and cotton exchanges, in an effort to secure their cooperation in effecting these changes, suggested in resolutions adopted by the Federation at its Vienna convention, in June.

The Federation has representation in 21 countries—England Switzerland, Belgium, Austria, Czechoslovakia, France, Germany, Holland, India, Italy, Japan, Spain, Sweden, China, Denmark, Egypt, Finland, Esthonia Hungary Norway and Portugal.

The Federation, Mr. Pearse stated in an interview, represents 90 per cent of the cotton mills of the world outside the United States. For the most part these are not particularly prosperous at the present time.

Late reports from various countries, said Mr. Pearse indicate that the spinning industry as a whole is not prosperous. Low prices for cloths have made spinning and weaving unremunerative in Belgium and there has been some stoppage of spindles. Austria reports the margin of profit in yarns and cloth still unsatisfactory so far as the home trade is concerned but prices for yarn exports are somewhat better. China reports that during the first three months of the year the expected revival of the yarn market did not definitely set in. In Czechoslovakia general slackness of purchases has caused the cotton trade to grow worse and exports have suffered, largely because of Italian competition.

Margins in the American section of the cotton industry of England suffered as a result of falling off of business during the second quarter of the year. France reports that prices leave a small margin of profit. A pretty regular demand exists, and manufacturers generally are engaged from four to five months ahead. The engagements of the German cotton industry during the second quarter of the present year might have been regarded as generally satisfactory, but toward the end of the quarter there were signs of a reduc-

tion in orders and some mills had to curtail their production. The outlook in Holland is less promising than three months ago. Spinning mills are working the full day shift but there is no night work and weaving mills are working only 40 hours per week. Italy reports present prices satisfactory but not quite as good as a few months ago. Norway says demand is dull. A report from India bearing date of July 3 said: "Business is about as bad as can be. Stocks of cloth and yarn are mounting up and sales are difficult even at reduced rates. It is feared that cotton mill results for 1925 will prove even more disastrous than those for 1924."

Russia is prosperous while in Poland demand is comparatively slack. Sweden reports a narrowing of margin with mills working only four days a week and prospects gloomy."

Classes in Textile Work

Raleigh, N. C.—The demand on the part of the public for novelties in textile goods, and the resulting changes in the manufacture of goods was reflected in the demand which the Trade and Industrial Education Bureau received for classes in the different phases of mill work, according to the report of George W. Coggins, director, to the Federal Government.

Textile classes occupied 60 per cent of the 229 evening classes for adult workers, according to Mr. Coggins' report. 24 per cent of the classes were devoted to the building trades and the remaining 16 per cent to all other trades combined. A total of 3,302 pupils were registered in the evening classes last year.

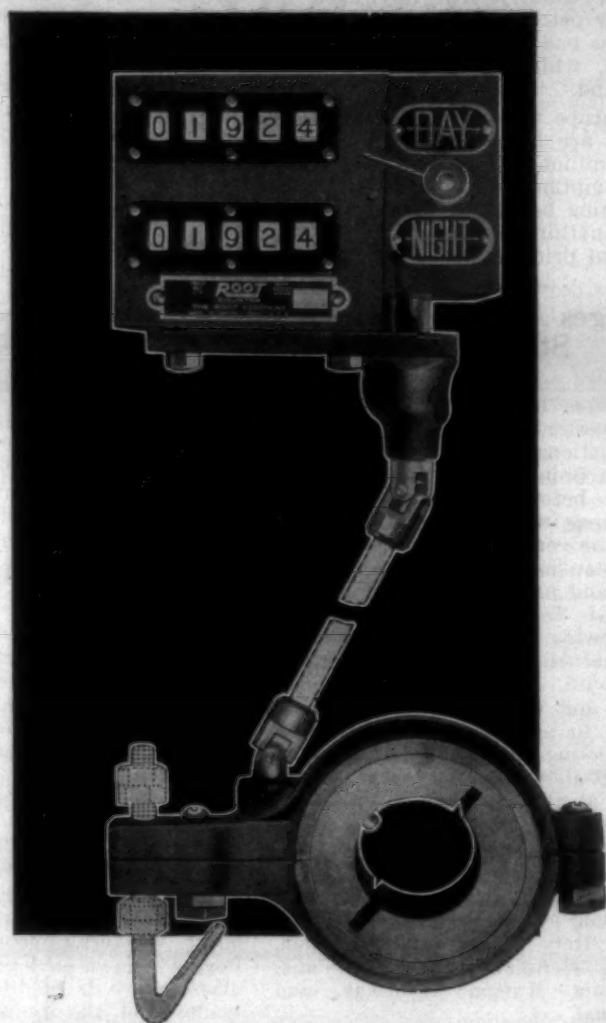
The employers realize that it is advisable for the employees to understand the various processes and operations necessary to the changes that have been made in manufacturing. Mr. Coggins pointed out, and some of the larger textile plants have taken over the classes begun by the Trade and Industrial Bureau and are conducting them as a part of the regular work.

In addition to the classes for adults, the bureau also conducts part time classes for juvenile students, that is boys and girls under 21 who are not in school may enter the general continuation classes which will require from one to two hours during the working day. Twenty-five of these part time or continuation classes were conducted last year with a registration of 640.

Four day trade schools were maintained with a registration of 102. Women and girls are admitted to the part time classes while five courses in trade preparatory work were offered to women.

This bureau is maintained under the State Division of Vocational Education of the State Department of Education. The classes show an increase of 11.4 per cent over last year, and an increase of 14.8 per cent in attendance.

The classes range over a wide variety of subjects in many trades.



What is a ROOT Pick Counter?

Just a small instrument, automatic in action, which, when attached to a loom, correctly records the picks. It increases production as one mill representative states "Our weavers now run the loom during the noon hour, and sometimes start them up before starting time and keep them running after stopping time; this, we believe, is the cause of our increased production."

It prevents "kicking the gear." It prevents padding of piece work reports. It keeps your actual unmistakable production costs before you at all times.

Want our booklets on textile counters?

The ROOT Co.

193 Chaplin St.

Southern Representative

W. A. Kennedy, 1106 Johnston Bldg., Charlotte, N. C.



Cotton Mill Processes and Calculations

By D. A. Tompkins.

Copy Revised for Third Edition.

(Continued from Last Week)

CONSTANT.

75. Referring to Fig. 20, the gear 40 which is marked in the engraving "draft," is the one that is generally changed to make a change in the draft of the machine. In order to facilitate calculations in making these changes, the "constant" for the frame is found in the same manner as in (38), that is, by taking the formula for draft, given in (74) and leaving out the draft gear, thus:

$$3 \times 48 \times 90 \times 24 \times 45$$

$$1\frac{1}{8} \times \text{---} \times 22 \times 51 \times 45$$

This works out 246.4, which is of course 40 times the former result. This number 246.4 is the "constant" or "dividend" for that particular machine. If draft is given, and it is

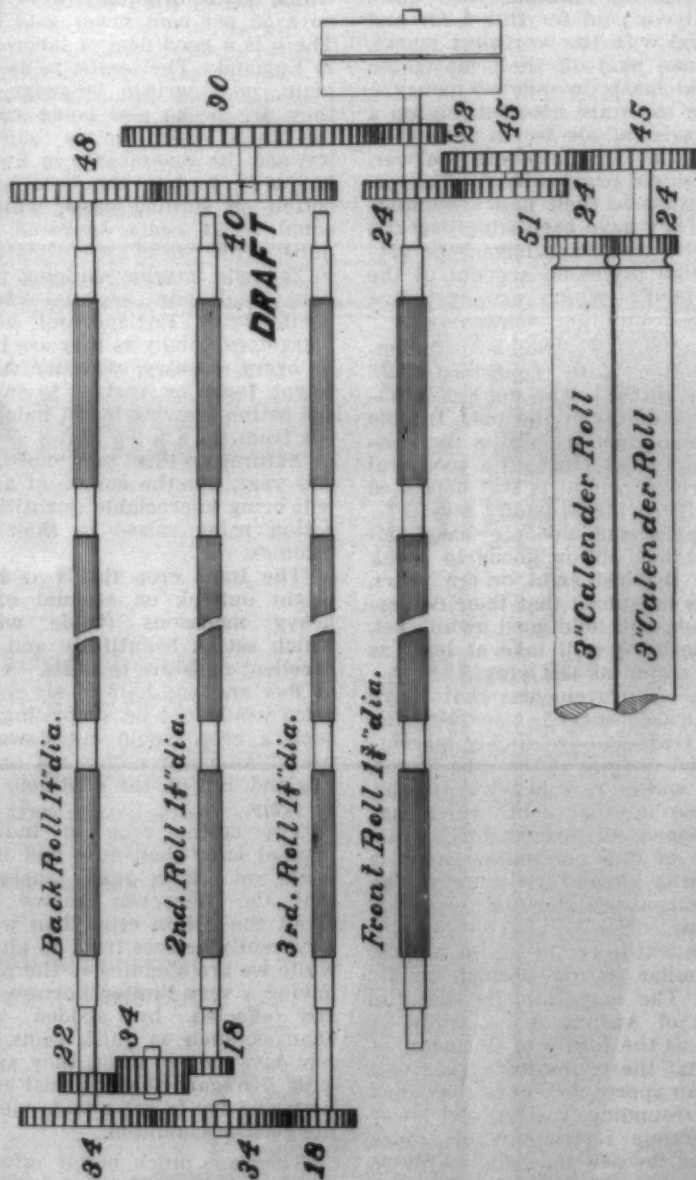
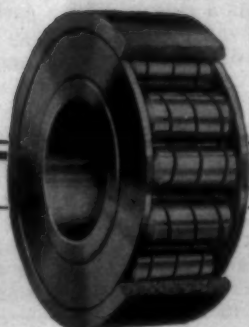


Fig. 20. Drawing Frame Gearing.

required to find the draft gear that would produce this draft, divide 246.4 by draft. If draft gear is given, and it is required to find what draft it would produce, divide 246.4 by draft

(Continued on Page 27)



Modern bearings for modern looms

THE modern loom is a piece of fine mechanical equipment. It is worthy of bearings that will guard it against depreciation and loss of effectiveness.

Such is the function of Hyatt roller bearings. On loom crank, cam and rocker shafts they provide a rolling motion and positive lubrication that results in easy running and the virtual elimination of bearing wear.

Hyatt equipped looms cost less to operate, yet they produce a higher quality cloth and a larger volume of cloth.

No bearing adjustments, repairs or replacements—no attention other than oiling once every three or four months.

Reliable performance from the day installed and a high degree of efficiency, maintained steadily year-in and year-out.

A ten year record is the proof of these statements. When you specify Hyatt bearings in your looms you are not experimenting—you are demanding the benefit of the most advanced development in loom building.

HYATT ROLLER BEARING COMPANY
NEWARK DETROIT CHICAGO SAN FRANCISCO
WORCESTER PHILADELPHIA CHARLOTTE
PITTSBURGH CLEVELAND

(Bulletin No. 2100 contains the interesting
story of Hyatt bearings on looms and other
textile machinery. Write for your copy.)

Forecast Places Cotton Crop At 13,990,000

Washington, Aug. 24.—An increase of 424,000 bales in this year's prospective cotton crop was announced today by the Department of Agriculture in its semi-monthly report which forecast production at 13,990,000 equivalent 500-pound bales.

Condition of the crop improved in the half month in all States except South Carolina, Alabama and Arkansas.

Drought continues in South Carolina, northern Georgia and south central Texas the crop reporting board stated, and small sized bolls are reported from those sections.

In Arkansas the crop has suffered chiefly from insects and diseases.

In its comment on the report the Crop Bulletin Board said:

Turn Out Uncertain

"In Texas the final out-turn of the crop is still extremely uncertain. An improvement in condition is noted in the northwest district, which has had good rains over most of its area and in many counties in the west west center. Other districts have practically held their own, except the east and southeast, which record a decline of four points each. Only the southeast district reports more weevil present than at this time last year. Damage from this source has been slight thus far except in portions of the south and southeast. Boll worms and leaf worms are present in scattered localities. Fully 2,000,000 acres

have been abandoned since June 25 or have stands so poor that they will not be picked. While rains have helped the crop in many sections the south central drought area has received very little benefit. As a rule, early ginnings have been from prematurely opened and under-sized bolls.

Oklahoma has had ideal weather in the southwestern western and central portions of the State and plenty of subsoil moisture for this time of the year in the eastern and southeastern parts. These conditions have more than offset increasing weevils, boll worm and leaf worms, the depredations of which are reported to be serious in many counties, damage from the boll worms being most frequently mentioned in the reports.

Crop Is Good

"Outside of the drought-stricken northern part of Georgia the remainder of the State has a good crop that is believed to be practically safe, with a larger indicated acre yield than on August 1.

"The Mississippi crop has not declined in condition as much as usual single August 1, and consequently has relatively improved. There are widespread complaints of rust and wilt, and of increase weevil activity, and some small damage from army worms is reported.

"Although dry conditions in south-central North Carolina has resulted in small although well-fruited plants, the prospects in most of the remainder of the State where much cotton is raised are for a good crop.

Weather favorable for weevil development might materially reduce the present outlook.

"In Missouri picking will be general by September 1, or nearly a month earlier than last year."

62 Per Cent Normal

The condition of the crop on August 16 was estimated at 62 percent of normal, indicating an acre yield of 144.1 pounds compared with 85.6 per cent and 139.8 pounds on August 16 this year and 64.9 per cent on August 16 last year when the final yield was 157.4 pounds.

Cotton of this year's growth ginned prior to August 16 totaled 577,921 running bales counting round as half bales, the Census Bureau announced in the joint report. Last year 135,901 bales were ginned prior to August 16.

Crop Condition.

The condition of the crop on August 16 and the forecast of production (in bales of 500 pounds gross weight) as indicated by the condition by States follows:

Virginia condition 79 per cent and forecast 52,000 bales.
North Carolina, 75 and 1,180,000.
South Carolina, 53 and 865,000.
Georgia, 61 and 1,000,000.
Florida, 78 and 28,000.
Missouri, 81 and 285,000.
Tennessee, 82 and 501,000.
Alabama, 70 and 1,002,000.
Mississippi, 77 and 1,322,000.
Louisiana, 65 and 560,000.
Texas, 46 and 3,769,000.
Oklahoma, 74 and 1,693,000.
Arkansas, 79 and 1,476,000.
New Mexico, 77 and 50,000.

Arizona, 92 and 88,000.
California, 93 and 102,000.
All other States, 92 and 17,000.

Cutter Heads Cotton Exchange

J. H. Cutter was elected president when officers for the Charlotte Cotton Exchange were elected for the ensuing year at the annual meeting of directors in offices of the exchange in the Johnston building.

Other officers elected were: H. H. Orr, vice-president; George M. Rose, treasurer, and Alford E. Walker, acting secretary-superintendent. The directors chosen to serve three years were: Theodore Parrish, Robert Lassiter, P. E. Partridge and C. W. Strobhar.

Reports from chairman of several committees were heard, which showed that the daily attendance at the exchange rooms and use of the exchange by members is growing rapidly.

A number of cotton mill executives have become members of the exchange during the past year. Practically every cotton broker and cotton firm as well as most of the cotton mill executives of the city and vicinity are now members of the exchange.

The board of directors, in addition to those elected is composed of the following members: C. W. Johnston, H. M. Dumbell, Jr., Arthur J. Draper, E. R. Doughtie, Ralph Van Landingham, L. C. Withers, H. M. Hardie, and B. B. Gossett.

To The Mills Of The South:

The Duplan Silk Corporation COMMISSION DEPARTMENT

Announces the Opening of Offices at

**Johnston Building
Charlotte, N. C.**

Mr. H. H. Cannon, SOUTHERN REPRESENTATIVE
IS THERE TO SERVE YOU

**RAYON AND SILK PREPARED IN ALL
FORMS FOR WEAVING AND KNITTING**

**Duplan Silk Corporation
COMMISSION DEPARTMENT**

New York Office—135 Madison Avenue

Mills—Hazleton, Pa., Dorranceton, Pa., Nanticoke, Pa., Wilkes Barre, Pa.

Howard Bros. Mfg. Co.

ESTABLISHED 1866

Home Office and Factory, Worcester, Mass.

Southern Branch Factory

167-169 South Forsyth St., Atlanta, Ga.

Southern Branch Office

1126 Healey Bldg., Atlanta, Ga.

E. M. TERRYBERRY, Southern Agent

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Cylinder and
Doffer Fillets
Napper Clothing

Stripper and
Burnisher Fillets
Emery Fillets

Top Flats and Lickerins Recovered and
Promptly Returned

Tempered Steel Twin and Domestic Iron Wire Heddles
The Best Materials Obtainable Make Up Our Products

Give us a trial on Cylinder and Doffer Fillets. This
will satisfy you as to the merits of our Card Clothing.

Let Us Fix Your Requirements

You are assured of complete satisfaction in all
your dealings with us.

The quality of our products and the service we
render are alone responsible for our growth. Em-
mons Quality Loom Harness and Reeds have re-
tained every old customer and gained new custom-
ers year after year.

Write us for estimates on your needs

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Cotton Harness, Mail Harness, Selv-
edge Harness, Reeds, Slasher and
Striking Combs, Warper and Liece
Reeds, Beamer and Dresser Hecks,
Mending Eyes, Jacquard Heddles, Etc.

EMMONS LOOM HARNESS CO., LAWRENCE, MASS.

Sole Agents for Wardell Pickers

The Largest Manufacturer of Loom Harness and Reeds in America

Southern Representative: GEO. F. BAHAN

EMMONS LOOM HARNESS AND REEDS

A WONDER PRODUCT

"H. P. C." WAFFLE DRESSING

THE HART PRODUCTS CORPORATION

CONSULTING CHEMISTS & MANUFACTURERS, NEW YORK, N. Y.

1440 BROADWAY.

Practical Discussions

By
Practical Men

Heddles Break.

Editor:

We are running a good deal of fancy work and our harness frames on which there are only a few ends break the heddles. What is the remedy? Weaver.

Six-Hank Single or Eight-Hank Double.

Editor:

To make filling yarn Nos. 38s to 42s, which is best to use, 6-hank roving, single process, or 8-hank roving, double process?

New Super.

Conditioning Filling.

Editor:

What's this I hear about boiling the filling? It is said that the filling on the bobbins is boiled to condition same. Can this be done? W. N.

Cams.

Editor:

I am studying cam work. My boss wants me to weave as much of our work on cams as possible to save the difference between paying the price of weaving on dobbies and the lower price paid for cam work. I am now changing from honeycomb weaves to huck weaves. Is there any way by which I can re-adopt my honeycomb cam so as to weave huck goods? K. A. B.

Speed of Front Roll.

Editor:

Would appreciate some of your readers answering the following through "Practical Discussions". What speed can the front roll of spinning frame be run on combed yarn made from strict middling Associations No. 8 with twist multiple of 3.8 to give quality yarn with few piecings on Nos. 24's, 30's, 36's, 40's, 45's, 50's and 60's. Spinner.

Answer to Rayon.

Editor:

Rayon is becoming so generally in demand in various lines of goods, that it is important to know how to run it right. And we are glad to have you ask this question. In the first place Rayon will not stand as much strain as cotton. In the second place it will not weave at so fast a speed as cotton can weave. Thirdly it will not weave on the

same beam with cotton yarn, because it does not have the same stretch nor elasticity as cotton. I order to weave Rayon in the best way, and have success with it, it should be on a top beam by itself. In this manner it can be held under entirely independent control. It can be independently tightened or loosened and woven under the exact conditions under which it should be woven. Again, rayon should not be sized or dressed like cotton. It will make it too stiff and too brittle. It will also chafe too much. Rayon should be wound on a wooden roll about 3 inches in diameter and each layer as wound on this roll should be lined with absorbent paper. This paper needs to be absorbent because the rayon as a rule is softened with a mineral oil preparation and this paper lining not only keeps the beam, as wound, perfectly level, but also absorbs the surplus oil which may be clining to the rayon.

Another reason for having the paper interlining between each layer of the rayon as built upon the care 3 inches wooden roll, is that it is of the utmost importance to have all the ends pull off exactly alike. The roll of rayon must unwind perfectly even. This paper interlining must not be used more than once. This extra top beam of rayon should not be larger than 8 or 10 inches when full. Martin.

Answer to Textile

Editor:

There are several causes for the conditions under which it should be evil you mention on your section as follows:

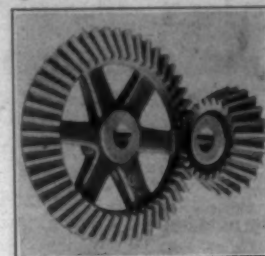
1. Mixed yarns.
2. Thick and lean ends.
3. Defective expansion combs.
4. Very uneven tension on the ends as drawn from the spools.
5. Worn out skewers.
6. Badly filled spools run over.
7. Yarns have too much variation in the twist.
8. Defective spools.
9. Over worn drop wires.
10. Some spools bound in the creel.
11. Spools filled soft and hard.
12. Drop roll or rising roll not working on the creel each time. Elitxet.

Answer to H. P.

Editor:

You can alter the conditions on your looms to add more harnesses as follows:

Chamber off on a slant your loom lay. Take off all of the wood you



We Manufacture Gears For All Industrial Purposes

All gears cut on automatic gear generating machines.

WE MAKE

Bevel Gears

3 pitch 18 inches or smaller.

Spur Gears

3 pitch 35 inches or smaller.

Worm Gears

3 pitch 18 inches or smaller.

Helical or Spiral Gears

3 pitch 18 inches or smaller.

Worms of all kinds.

We specialize on heat treated steel motor pinions, Gears for Pickers, Cards, Lappers, Combers, Drawing, Roving and Spinning Frames, Spoolers, winders and all textile machinery.

Gears Made From

Steel, Iron, Bronze, Rawhide or Fabrol materials.

Send drawing or sample gear.

Prices on application.

FERGUSON

GEAR COMPANY

Gastonia, N. C.

West Airline Ave.

Phone 1070



MI CLEANSER

The Name to Remember
When You Want

An Ideal

SCRUBBING POWDER

for

TEXTILE MILL FLOORS

THE DENISON MFG. CO.
ASHEVILLE, N. C.

Southern Sales Agents

Southern Textile Specialty Co.
101 Augusta St., Greenville, S. C.

can in this way, providing your lay will have enough strength left to function right. This will probably enable you to clear enough space in front of your loom for a couple more harnesses.

Now, at the back, put on the harness on which there are the least amount of ends. Shorten these harnesses so as to clear the loom crank elbow. And "presto" you have probably made room for two to four more harnesses on your looms.

Helter Skelter.

Answer to Charlie.

Editor:

I am an overseer of spinning and am very glad to know that your overseer urges you and his other men to read the textile papers. It is a sign of progress for him and his men too.

Now I will answer your question on Contraction. The difference in length between the amount of sliver delivered at the front roll untwisted, and the length of the yarn after being twisted is the active Contraction. The harder the yarn is twisted the more will be the contraction. This is why warp yarn contracts more than filling yarns. Another interesting question answers itself in connection with this problem. On account of the difference in the twist between warp and filling, the contraction will not only be different, but you cannot use the same draft gear for making the same number of filling as warp from the same hank of roving. Filling, owing to having less twist will have less contraction, therefore it will have more length per pound of cotton, and thus be finer yarn.

Henry.

Fine Goods At Exposition

Side by side with the finest fabrics of Southern mills will be silk and cotton dress goods from New England mills at the Made-in-Carolinas Exposition and Fashion Revue, in Charlotte September 21 to October 3 according to an announcement by J. C. Patton, secretary of the Exposition.

Practically two-thirds of the first floor of the Exposition hall will be taken up with this exhibit it was explained.

Internationally known dress materials of the American Cellulose Company (Rayon), Mallison Silk Company, Vscose, Duplan, Stehil, Judson and Van Raalte, will be displayed on live models.

Ten beautiful models employed in the New York and Paris studios of Edward Mayer, women's wear creator, will come to Charlotte on a special Pullman chartered for the occasion, the announcement said. The personnel of his entourage will be made known upon Mr. Mayer's return from Paris, for which city he will leave Tuesday.

Director McCarthy, of the Famous Players Lasky Corporation, telegraphed that is now communicating with Alice Terry, Gloria Swanson and others of their stars to learn

who can arrange to come to Charlotte as representative of the organization during the holding of the exposition.

An area of 1,800 square feet has been set aside on the second floor for the use of women and girls from over the Carolinas, entrants in the dress designing contest. Cash prizes to the amount of \$1,000 are offered by the exposition and these have been supplemented by Carolinas manufacturers offering special prizes for the best designed home-made dresses and costumes.

The usual Chamber of Commerce lunch will be served through the courtesy and aid of Clarence Kuester, business manager of the Chamber.

New National Dye.

Among the recent additions to the National line of direct dyes is National Erie Bordeaux B. This new dye yields bluish-red tones on cotton and artificial silk both viscose and tubize and will prove useful for the production of shades similar to wine, garnet, mulberry, etc., when used either as a self color or in combination.

This new product possesses excellent solubility, dyes level, is of good fastness to light, and of general goods fastness to both washing and crocking, properties which should suggest its use for many purposes. Owing to its excellent dischargeability with hydrosulfite, it is recommended for all classes of cotton fabrics that are subjected to this process.

In the dyeing of unions, results are good; cotton is colored a slightly bluer shade than either silk or wool.

In general, this new dye will serve many purposes in the cotton and artificial silk dyehouse when a bluish-red is employed. It is fully described in National Bulletin No. 50, a copy of which can be obtained upon request from any of the branch offices.

Spinning Activity Less.

Washington, Aug. 21—Cotton spinning activity declined in July compared with June, but was greater than in July last year.

Census Bureau statistics made public today showed that active spindle hours for July totaled 7,297,648,494 or an average of 192 per spindle in place, compared with 7,690,315,823, or 293 per spindle in place, for June this year and 5,157,779,726, or 136 per spindle in place, for July last year.

Spinning spindles in place July 31 numbered 37,936,784 of which 31,706,956 were active at some time during the month, compared with 37,853,241 and 32,309,89 for June this year and 37,786,464 and 28,710,359 for July last year.

The average number of spindles operated for July was 31,967,971 or at 84.3 per cent capacity on a single shift basis, compared with 33,688,084, or at 89.0 per cent capacity, for June this year and 22,697 or at 60.0 per cent capacity for July last year.

Improved Loom Harness

Mill after mill on print cloths, sheetings, drills, colored goods, denims, as well as on all classes of fancy weaves in cotton, silk and worsted goods, is equipping looms with our "Duplex" flat steel harness.

YES? WHY?

"Duplex" lasts twelve times as long as twine harness, can be changed more quickly from one cloth to another, and is more satisfactory in every way than any other loom harness known.

Note: Our loom harness is shipped out completely assembled and ready for drawing your warps in plain or fancy weaves, or heddles can be assembled by you on the frames at your mill.

STEEL HEDDLE MFG. CO.

GREENVILLE

PHILADELPHIA

PROVIDENCE

"Duplex" Loom
Harness—complete
Frames and
Heddles fully
assembled

Harness Frames
Selvage Harness
Leno Doups
Jacquard Heddles

SOUTHERN PLANT
Greenville, S. C.

HAMPTON SMITH
Southern Manager

Drop Wires
Nickel-Plated
Copper-Plated
Plain Finish
Improved
Loom Reeds
Leno Reeds
Leno Reeds
Combs



Positive Protection

—at its lowest cost per year

Here's a stronger, durable fence that positively bars the intruder —lessens theft and fire danger, increases the value of plant property far more than the cost of the fence.

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GENERAL EQUIPMENT CO.

Realty Building

Charlotte, N. C.



PAGE FENCE

SOUTHERN TEXTILE BULLETIN

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DAVID CLARK
D. H. HILL, Jr.
JUNIOUS M. SMITH

Managing Editor
Associate Editor
Business Manager

SUBSCRIPTION

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ADVERTISING

Advertising rates furnished upon application.
Address all communications and make all drafts, checks and money orders payable to Clark Publishing Company, Charlotte, N. C.

Why Not Advertise?

THOUSANDS of people from all parts of the country are daily flocking into Florida. They are following the trail of easy money, lured by the lust for gold that has moved man since time immemorial.

The boom in Florida has eclipsed anything that the country has ever known. The gold rush to California and the Klondike, which were record-breakers in their day, have been made small by comparison. The thousands of dollars that went West in search of oil are but a drop in the bucket compared to the millions that are pouring into Florida.

Men and their families are herding themselves into Florida without thought of productive work. They are intent on quick wealth without effort, of getting rich overnight. They are moved more than anything else by the tales of wondrous riches that have come out of Florida. They are the victims, or the beneficiaries, whichever you choose, of advertising.

Any army is said to travel on its stomach. The invading army into Florida travels on advertising. Its money-madness is nurtured on publicity.

Laying aside all other considerations, the biggest single factor in the exodus to Florida is advertising. Florida is the best advertised, the most talked of place in the world today. Newspaper campaigns, magazine articles, free bus and train trips and the awe-stricken whisperings of endless wealth have all combined to give Florida its place in the spotlight. The men behind the real estate boom in Florida have given the country its biggest and most sensational bit of advertising. No matter where you go, you can't get away from the talk of Florida.

Regardless of the intrinsic worth of Florida real estate, the productivity of its soil, the advantages and delights of its climate and the permanence of its development, the boom in Florida would have never been possible except through the agencies of publicity.

Had Florida, for example, spent no more for advertising this year than the Southern mills have spent for advertising, Florida would have been no closer to a boom than the mills are, which today is quite a considerable distance.

We believe that if the cotton mills of the South would enter into a co-operative advertising campaign to popularize and broaden the use of cotton goods, to find new markets and new uses for cotton goods, that the results would within a short time be apparent to the most hard-shelled old-timer in the business.

Publicity is the biggest force in business today and the intelligent application of this force would create a demand for cotton goods that would enable the mills to operate steadily and profitably.

Advertising is no new factor in the textile industry, but its use in going straight to the public is comparatively limited. We do not believe that there is another industry with even half the invested capital of the textile industry, that makes so little use of publicity.

There are plenty of examples of successful advertising in marketing textiles to prove its worth. For example, the makers of Palm Beach fabrics immediately went direct to the consumers with an advertising campaign that has built up a nation wide demand for these goods.

Amory, Browne & Co., of New York, have been running a newspaper advertising campaign in New York papers to increase the popu-

larity of cotton goods, to help make cotton fabrics stylish and therefore desirable. An extract from one of their advertisements says:

"Today the pendulum of public approval has swung so far toward cotton that we see the avenues dotted with spots of brilliant color that are cretonnes done into coats and frocks. We note well-dressed men selecting cotton neckties at top-neckwear prices. We see beautiful designs in fine cotton bathing costumes at the fashionable watering places. Everywhere we note that cotton is coming into a new and greater popularity."

If the whole textile industry would combine to advertise along the lines so well illustrated by the above quotations, we believe it would be a tremendous factor in insuring continued prosperity for the mills.

The public will want and will demand cotton goods, if they are properly advertised.

The Cotton Report

THE Government report, issued on Monday, showed an indicated crop of 13,990,000 bales, which was much less than most of the private estimates.

It indicated a crop of less than the probable world's requirements of American cotton, and this being the third indication of a yield of less than 14,000,000 bales, it has caused the cotton world to wonder whether or not all the bear talk has been justified.

We have as yet no fixed opinion of the size of the 1925 crop, but reports that are coming to us from conservative people, many of which have lived or have recently traveled in the alleged "good sections," causes us to believe that the crop has been viewed as having larger possibilities than will be proved by the ultimate outcome.

It is our opinion that dry weather and poor stands can not produce record yields and that soon there will be reports of disappointment relative to the yield of lint cotton and that in all probability the yield per acre in most sections will be the most disappointing of recent years.

We see no probability of an excessive yield and doubt very much if there is an adequate yield.

We doubt if the Government will again this season report an indicated yield of 13,990,000 bales.

Cotton Dresses Coming Back

WE spent two days in New York last week and were distinctly impressed with the fact that cotton dresses predominated on Fifth Avenue and elsewhere.

Two months ago everybody was wearing silk but now cotton seems to have come back into its rightful position.

It is true that most of the cotton dresses were sheer fabrics and that practically no gingham were worn,

but a prominent merchant stated at the Merchants' Club that he expected next season to be a gingham and plaid season.

The striped dresses that have been so popular this season have become so "common" that it is very probable that there will be a change in style and gingham and plaids are the logical change.

Wages in China

PEOPLE who live in the United States, and sometimes complain about the wages they receive, little realize how much labor people in other countries have to perform for the meager wages they receive.

The following is an extract from a report relative to laborers at Nanking, China:

The earth digger gets a kind of yellowish clay from certain pits in the hill sides of Nanking, and sells to the local brick burners either directly or through a contractor. A picul of the clay is sold for six or seven coppers. A digger can earn about 300 cash or 30 coppers per day. Stone-breaking enables the immigrant to earn about 20 cents a day. This work is also done by the women folk.

What Mill Is That?

THE average Southern mill is proud of its plant and product, but comparatively few of them have taken the trouble to put up signs that will identify the mills to the passing stranger. Travelers through the South, especially through the Piedmont Carolinas, where one is seldom out of sight of a cotton mill, are continually asking the question "What mill is that?"

Many visitors from the North and East who are interested in textiles and who are familiar with the names of many Southern mills, have spoken to us of the fact that so few of the mills have their names displayed. They are interested in every mill they see and the first thing they want to know is the name of the plant and the kind of goods it makes.

Many of the larger and more successful mills have for years displayed signs showing their names and products. For instance, the traveler through Kannapolis, either by rail or motor, sees the big Cannon trade-mark done in an illuminated sign that marks the largest towel mills in the world. At Greensboro, the Revolution Mills broadcast their name and flannels with an electric sign that is easily seen both day and night. And of course, a large number of other mills whose names and products are painted on the water tower or mill buildings are quickly identified.

The mills, of course, are under no obligation to put up signs for the edification of those who pass their gates. At the same time, the mill with its name boldly displayed is always more interesting and attractive than the ones whose identity is left to guess and the publicity gained through the use of attractive signs is entirely worthwhile.

We wish that all mills, with the possible exception of a few that are better left nameless, would "hang out their shingles".

Personal News

Edgar Gilley has resigned his position in the spinning room at the Lilly Mill, Spray, N. C.

J. N. Bryant has resigned as loom fixer at the Draper-American Mills, Draper, N. C.

S. J. Cochran has resigned as overseer carding at the Avondale Mills, Sylacauga, Ala.

J. S. Shell has been promoted to overseer carding at the Avondale Mills, Sylacauga, Ala.

A. A. Haddox has resigned as second hand in carding at the Avondale Mills, Sylacauga, Ala.

W. A. Carter has become second hand in carding at the Avondale Mills, Sylacauga, Ala.

E. S. Ward has resigned as superintendent of the Pomona Mills, Greensboro, N. C.

M. E. Maxwell has been promoted to second hand in carding at the Buck Creek Cotton Mills, Siluria,

M. Quay Wiliford has opened an office in Gastonia, N. C., for the Coker Cotton Company, of Hartsville, S. C.

J. R. Burke has been promoted to superintendent and local manager of the Gambrill and Melville Mills, Bessemer City, N. C.

J. M. Little has resigned as night overseer of carding at the Aldora Mills, Barnesville, Ga., and accepted a position with the Dixie Spinning Company, Chattanooga, Tenn.

E. D. Pitcher, treasurer of the Carolina Cotton and Woolen Mills, Spray, N. C., who has been on a tour through Canada, is expected home this week.

J. F. Bryant has been promoted from overseer spinning to overseer carding, spinning, spooling and warping at the Buck Creek Cotton Mills, Siluria, Ala.

C. J. Ashmore formerly superintendent of the Cascade Mills, Mooresville, N. C., has accepted a similar position with the Pomona Mills, Greensboro, N. C.

J. P. Inglett has resigned as overseer carding at the Buck Creek Mills, Siluria, Ala., and accepted a similar position at the Danville Knitting Mills, Bon Air, Ala.

Samuel Turner, Jr., has resigned his position with the Victory Manufacturing Company, Fayetteville, N. C., to become assistant general manager of the Mansfield and Jennings Mills, Lumberton, N. C.

T. A. Drake has resigned as overseer of spinning, spooling and warping at the Martell Manufacturing Company, Egan, Ga., to become overseer of spinning and spooling at the Covington Cotton Mills, Covington, Ga.

F. M. Morris, of Cowpens, S. C., is now located at Union, S. C.

J. D. Sirah has returned to his former position as second hand in carding at the Orange Cotton Mills, Orangeburg, S. C.

J. B. Boynton has resigned as overseer of spinning at the American Cotton Mills, Bessemer City, N. C., to become general second in spinning at the Borden Mills, Kingsport, Tenn.

H. L. Holden, of Charlotte, has accepted the position of superintendent of the Jennings Mills, Lumberton, N. C.

L. C. Lovern has resigned as night overseer spinning at the St. Pauls Cotton Mills, St. Pauls, N. C., and accepted the position of overseer spinning at the Jennings Mills, Lumberton, N. C.

Charles E. Roberts, who for many years has been in charge of the sales department of the Bibb Manufacturing Company, Macon, Ga., and who has been with the Bibb chain of mills for more than 20 years, has resigned his position and will enter business for himself in Florida.

Barnhardt-Lucas

T. M. Barnhardt, Jr., of Charlotte and Miss. Ernestine Lucas, of Columbia, S. C., were married August 22, and are now on an extended tour of the Great Lakes and Canada. They will be at home after September 15th.

Mr. Barnhardt is treasurer of the Barnhardt Manufacturing Company, Charlotte.

Bibb Mills to Build Waste Plant.

The Bibb Manufacturing Company, Macon, Ga., is planning to erect a large waste mill, according to reports from that city. Officials of the company have not yet made definite announcement regarding the plant, which is expected to be located somewhere in middle Georgia.

New Plant for Richmond Hosiery Mills.

The Richmond Hosiery Mills, Rossville, Ga., and business men of Soddy, Tenn., are planning to erect a large knitting mill at the latter place. Official announcement is expected by Garnett Andrews, president of the Richmond Hosiery Mills after his return from Europe.

Whitney Manufacturing Co. Whitney, S. C.

B. R. Burham.....Supt.
Robert Huskey.....Carder
D. J. Quillen.....Spinner
J. K. Poole.....Weaver
W. L. Moore.....Cloth Room
T. F. Henderson.....Outside
J. C. Hewitt.....Master Mechanic

Bobbins and Spools

Particular attention given to
All Types Of Warp
Bobbins For Filling Wind
Samples of such bobbins gladly
furnished

The Dana S. Courtney Co.
Chicopee, Mass.

A. B. CARTER, Southern Agt, Gastonia, N. C.

BLEACHERS!

- 1) Can you imagine
bleaching in 8 hours
from grey to finish?
- 2) and cutting out
your seconds and tender goods?
- 3) and obtaining
a perfect, permanent white
with softness and elasticity?

No, it doesn't cost more!

Answer: The Solozone Process.

THE ROESSLER & HASSLACHER CHEMICAL
COMPANY

709 Sixth Ave.

New York

MILL NEWS ITEMS OF INTEREST

Tifton, Ga.—Work has started on an addition to the Tifton Cotton Mills, which will be 125 feet by 100 feet in size. The mill now operates 5,000 spindles and will operate 7,200 spindles when completed.

Greenville, S. C.—The Woodside Cotton Mills Company placed contract last week with the Bahnson Company for new humidifier system for their cloth room.

Fountain Inn, S. C.—The Woodside Cotton Mills Company have awarded contract for new humidifier system to the Bahnson Company, Winston-Salem, N. C.

Macon, Ga.—Charles E. Roberts, in charge of the sales department of the Bibb Manufacturing Co., and a member of that organization for more than 20 years, has resigned and will within a few weeks give up his duties here, it became known here.

Covington, Ky.—The Sek-Reliance Company, which is a subsidiary of the Sek Manufacturing Company, has been incorporated with a capital stock of \$500,000 by W. A. Clark, president, and others. The new company has purchased the Reliance Textile and Dye Works and will dye and finish piece goods, the plant having a weekly capacity of 50,000 yards.

Macon, Ga.—The Arnett Manufacturing Company is erecting a big factory here for the manufacture of spindles for cotton mills. It is the only plant of its kind in this part of the Southeast. With the expansion of Southern cotton mills and the addition of new mills to this territory, it is expected that there will be a good demand for the products of this plant.

Kings Creek, S. C.—The company to erect a new mill here, as previously reported, has been organized as the Love Mills, with A. W. Love, president and treasurer, W. M. Faulkner, vice-president, and W. A. Love, secretary.

Details as to the size of the plant and when construction will be started have not yet been determined.

Chattanooga, Tenn.—The general contract covering the erection of the new building for Central Franklin Process Company has been awarded to Gallivan Construction Company, Greenville, S. C. The building will contain approximately 41,000 square feet of floor area and will be of slow burning mill construction with brick walls and steel sash windows.

Part of the building will be two stories in height.

Plans and specifications were drawn up by J. E. Sirrine & Co., Greenville, S. C.

Nashville, Tenn.—The Nashville Chamber of Commerce is reported to be negotiating with Canadian mill men who are interested in locating a textile mill here.

Fort Worth, Texas—The Fort Worth Cotton Mills have been incorporated with an authorized cap-

ital stock of \$1,000,000 by W. H. Slay, W. C. Durringer and R. C. Sweeney. The new company states that construction on the plant is expected to start about December 1 and that the building will be 90x500 feet, brick and concrete, two or three stories high. No engineers or contractors have yet been engaged.

Corsicana, Tex.—Manager Nau, of the Corsicana Chamber of Commerce, has made a trip investigating propositions by Eastern cotton mill owners to move their plants to Texas. Under a proposition now being considered by Corsicana the machinery of an Eastern mill would be appraised by an engineer accepted by both the people of Corsicana and the mill owners. Corsicana would then subscribe a sum equal to this for the erection of buildings for operating capital and the plant would be removed to Corsicana.

Charlotte, N. C.—W. H. & A. E. Margerison & Co., of Philadelphia, manufacturers of the well known and nationally advertised "Martex" brand of Turkish towels, etc., contemplate a formation of a company, capitalized at \$1,000,000, for the making of a more medium grade of merchandise, for which they are having increased demand.

The production of this Southern mill to be sold in conjunction with their high grade line now made at their Philadelphia plant.

Several North Carolina sites in the vicinity of Salisbury and Concord are now receiving their attention.

Greensboro, N. C.—In connection with the erection of an addition to the Proximity Print Works, it is planned not only to manufacture more yardage but also to make a greater diversity of patterns. A large sum will be spent in equipping the addition with new machinery. The structure will be 500x100 feet mostly one-story, of brick, concrete and steel, and will practically double the capacity of the print works, which is the only one of its kind in the South.

Engineers of J. E. Sirrine & Co. are here inspecting work on the large warehouse nearing completion at the Proximity cotton mill and they will probably remain to handle inspection of the new project, as well as supervise the re-roofing of the White Oak Mill.

Anniston, Ala.—Work of clearing the ground on a site recently purchased by N. S. Perkins, of this city, and associates, for a new cotton manufacturing plant, has been started and erection of buildings will be started as soon as material can be assembled, it is announced.

Phillip Noble, of Nashville, will be associated with Mr. Perkins in the new enterprise. Others interested in the industry are understood to be local men but their names have not been made public.

The buildings to be erected will be of brick and concrete and constructed with a view to enlargements when the business shall have expanded to an extent to demand more space, it is said.

Among the products of the plant will be material for bathrobes.

THE FARISH COMPANY

COMMISSION MERCHANTS

100 WORTH STREET

NEW YORK

THE SUPERIOR PORCELAIN

for

Textile Machinery

manufactured by

Page-Madden Co.

Incorporated

128-34 Sumpter St.
Brooklyn, N. Y.

Samples and Catalog upon Request

LIBERTY MUTUAL INSURANCE COMPANY

W. R. Pederson, Resident Manager

Carolina National Bank Building, Spartanburg, S. C.

Employers' Liability Insurance, Automobile Insurance, Public Liability Insurance

Cash refunds to policyholders, amounting to nearly \$13,000,000 since organization. Have realized savings to them of at least 20% of the standard stock company insurance cost.

W. A. JONES & CO.

COTTON

123 South Front Street

Memphis, Tenn.

Members American Society Landscape Architects

E. S. DRAPER

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These mills will be the third industry located here within a few months which include a branch plant of the Avalon Knitwear Company, of Utica, N. Y.

Goldville, S. C.—The new addition to the Joanna Cotton Mills has been finished, machinery installed and now running to full capacity.

The Joanna Cotton Mills was organized in May, 1924, taking over the Banna Manufacturing Company plant, of 14,000 spindles and 350 looms. The capital stock was originally placed at \$500,000, and has since been increased, by the new company, to \$1,000,000. The mill now operates 30,000 spindles and 700 broad looms, with additional machinery in proportion. While the mill has been more than doubled by the addition of new buildings, of modern mill construction, an entirely new village has also been constructed, with cottages of the bungalow type with all modern improvements, such as graded and curbed streets, sidewalks, water, light and sewers.

The Joanna Cotton Mills is going to pay particular attention to the landscaping of their new village, and have a gardener permanently employed to achieve this end, in the hope that it will eventually have one of the most beautiful villages in the South. Among the improvements, which the company has in mind, is a lake and pavilion for the use of employees, together with a new school building and girls' dormitory.

The engineering of the mill and village was handled through Lockwood, Greene & Co.

The mill manufactures muslins for finishing into window shade cloth exclusively, in several different constructions and widths, the entire product being shipped to the Oswego finishing plant of the Stewart Hartshorn Company, at Oswego, N. Y.

Greensboro, N. C.—About \$300,000 was involved in two contracts let here by the Proximity Manufacturing Company, one for an addition to the Proximity Printing Works and one for reroofing the White Oak Mill. Both contracts were let to the Fiske-Carter Construction Company, of Greenville, S. C. Work will begin at once.

The addition to the print works will call for the erection of a structure 500 by 100 feet, mostly one story. Excavation for this addition is already practically completed. The addition will be of

similar construction to the present print works, brick, concrete and steel.

A new roof of steel construction will be placed on the entire White Oak Mill. The new roof, like the present one, will be of saw-tooth design, the straight sides to contain glass. J. E. Sirrine & Co., of Greenville, S. C., are the engineers for both construction jobs. Engineers for this organization are now here

inspecting work on the big warehouse nearing completion near the Proximity Mill and these engineers will probably remain in Greensboro to handle inspection on the two new construction jobs.

Officials of the Proximity Company stated that the contracts called for the expenditure of several hundred thousand dollars. In addition to the money to be spent for building the addition to the print works

works a considerable sum will be used to purchase additional machinery.

The Proximity Manufacturing Company, it was stated, plans to enlarge its print works plant not only so that more yardage of printed goods may be manufactured but in order to manufacture a greater diversity of patterns. Proximity Print Works is the only one of its kind in the South. This action means practically the doubling of the old plant.

Drought Causes Mill Curtailment

Spartanburg, S. C.—Effects of the prolonged drought on the industries of Spartanburg were indicated in reports from several cotton mill that curtailments are being ordered because of lack of power.

The sharpest curtailment reported is that from Spartan Mills, which expects to shut down its number two plant next Monday morning. While officials pronounced themselves as unable to say how long it would remain closed, intimations of a two week's shut down were made. Approximately 200 employees will be effected by the curtailment, officials said, but it is believed that some plan by which all of the operatives will be given part time work will be adopted.

A part of the machinery in Saxon mills was stopped Friday morning, John A. Law, president, said. This partial curtailment will be continued through Saturday. Chesnee mills, another one directed by Mr. Law, is still operating on a full time basis, although a partial curtailment may be made there, it was learned.

The Enoree Cotton Mills, a few miles south of the city, was unable to start up Friday because of the low water in the Enoree river, and will be closed down indefinitely.

The Pacific mills and bleachery at Lyman reported that while no curtailments have been made yet, notice has been received from the Southern Power company, which furnishes energy for the plant, that a zoning system will be inaugurated unless rains occur immediately, and that a shut down one day a week will be required.

The Southern Power company system will be divided into five zones, and one of them will be cut off from power for a day each week as long as the drought continues, Lyman officials said.

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mills.

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Cotton Hedging for a Gray Goods Mill

(Continued from Page 7)

Future Contract:
Sold 10,000 bu. at \$1.26.....\$12,600
Purchased 10,000 at \$1.11..... 11,100

Profit on future contract.....\$ 1,500
Wheat Inventory:
Purchased 10,000 bu. at \$1.25.....\$12,500
Sold (flour sale) 10,000 bu. at
\$1.10..... 11,000

Loss on wheat inventory.....\$ 1,500
If the price of wheat had risen 15 cents a bushel, there would have been a \$1,500 profit on the wheat, and a loss of \$1,500 on the future, which the miller would be willing to pay to insure the return on his milling operations.

"In both these cases of protective hedging by a flour mill, correspondence in prices was necessary, not only between cash wheat and futures, but also between wheat and flour. This correspondence between wheat and flour prices commonly is attributed to the fact that the cost of the raw material represents a large proportion of the final cost of flour and the manufacturing proc-

ess ordinarily is not of long duration.

Elements Involved.

"In the case of raw cotton, spot and futures prices tend, generally, to follow the same course. If this relationship were sufficiently close, the general effect of a consistent policy of protective hedging by a gray goods mill presumably would be substantially the same as if the cotton required to fill each order for cloth were purchased on the same day that the cloth order was received. In other words, a mill, by hedging, could insure itself that the cost of the cotton going into each order of cloth would be substantially the same as the spot cotton prices prevailing on the day when the order was received. Under these circumstances the mill would be relieved from speculative risks on raw cotton.

"To complete the parallel with the case of the flour mill, however, there remains the question whether a sufficiently close degree of correspondence exists between cotton prices and cloth prices; in other words, whether the prices of gray goods and of raw cotton can be expected to fluctuate concurrently,

and to substantially the same degree. The fact that raw cotton constitutes a major part of the value of the gray goods points to the conclusion that, if protective hedging is practical for any type of cotton manufacturer, it should be practical for a gray goods mill.

"The plan of this bulletin is to present: First, the results of the computation of gains and losses that would have been incurred in buying and selling cotton futures for purposes of hedging; second, an estimate of the gains and losses experienced on actual cotton holdings; and third, a comparison of the movements of cloth and cotton prices."

Knitting Viscose Rayon

(Continued from Page 14)

mit of their efficacy when viscose yarns are being knitted.

On seamless hose machines, however, it is impracticable to use these wheels, and suitable tension is obtained by means of adjustable spring discs, or by wrapping the yarn round a polished surface, while modifications of the old knit-

ter's method of running the yarn over oily waste are often to be seen. It must be admitted that viscose yarns are sensitive to tension variations, and that different lengths in the panels occur owing to varying winding tensions. Viscose yarns are well adapted for the production of tuck fabrics, and a number of stitches may be retained without breakage.

Dyeing and Finishing.

Knitted goods made from viscose silk yarns, whether solid, plated, or partly viscose and partly wool or cotton, can be dyed quite readily, providing suitable colors are selected, which, on proper temperature control, will give more or less solid shades. Usually the viscose yarns take up the direct cotton colors more readily than cotton. Seams and reinforced parts will be penetrated much better by entering goods at a high temperature and subsequently cooling to allow the cotton parts to become dyed to the shade of the viscose silk.

Fabric made from viscose yarns is usually finished under the steam press, as are also hose and half hose.—American Silk Journal.

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Cotton Mill Processes and Calculations

(Continued from Page 17)

gear. Suppose it be required to make a draft of 6; dividing 246.4 by 6 gives 41.1; and it would be necessary to use a gear of 41 teeth. Using gear 41, the exact draft would be $246.4 \div 41 = 6.01$. Using a gear of 42, the draft would be $246.4 \div 42 = 5.87$.

The gearing plan shown in Fig. 20, where some of the gears are at one end of rolls, and some at the other, is not universally adopted. Some builders prefer them this way, while others prefer to put all the gearing at one end.

Three draft gears, varying by 1 tooth, are usually furnished with each machine.

76. In the calculations above, the draft is computed between the back rolls and the calender rolls, without taking any notice of the way in which the entire draft is divided between the several pairs of rolls. This is all that is necessary in the mill, because the machine is so designed that whatever the change made in total draft, the other drafts are divided up in the same proportion. But it is interesting to examine the various partial drafts to see how they are distributed. Referring to Fig. 20, the draft between back roll and second roll is

$$\frac{1\frac{1}{8} \times 22}{1\frac{1}{8} \times 18} = 1.222.$$

The draft between 2d and 3d is

$$\frac{1\frac{1}{8} \times 18 \times 34}{1\frac{1}{8} \times 22 \times 18} = 1.545.$$

The draft between the 3d and front is

$$\frac{1\frac{1}{8} \times 18 \times 48 \times 90}{1\frac{1}{8} \times 34 \times 40 \times 22} = 3.176.$$

The draft between front and calender is

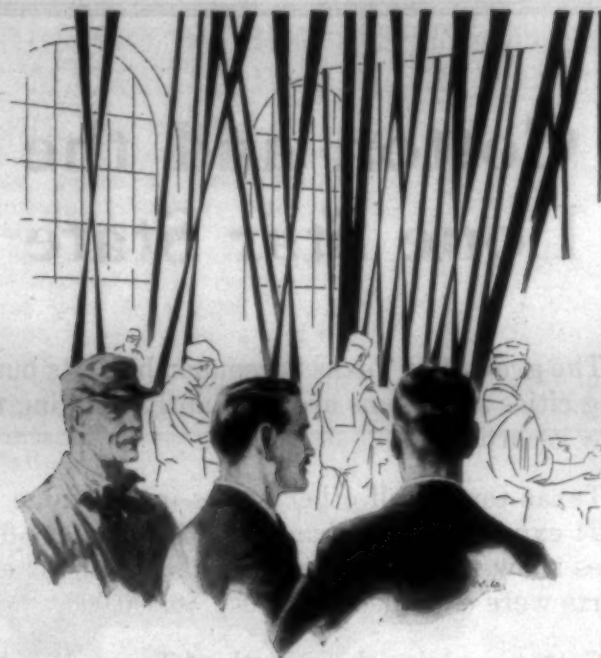
$$\frac{3 \times 24 \times 45}{1\frac{1}{8} \times 51 \times 45} = 1.027.$$

Therefore, the entire draft is $1.222 \times 1.545 \times 3.176 \times 1.027 = 6.16$, which is the same results as before.

It is the custom with most superintendents and some text books to figure draft of a drawing frame simply between back and front rolls, ignoring the draft between front roll and calender roll. But this is too great an error to be permitted. In the case above, the draft, ignoring calender roll, would be 6.00, instead of 6.16. This error in each of the three processes would accumulate, and lead to trouble in calculating weight of sliver.

Most recent frames have, in addition to the rolls shown in Fig. 20, a "lifting roll." This is placed back of the spoon stop motion, to lift the sliver from the can, and thus reduce the strain which would otherwise exist on account of the friction in the spoon, when being drawn up by the back roll. This lifting roll is driven from the main train of roll gears, in such a way that there is a small draft between it and the back roll, usually about 1.02. In this case, it is important to calculate the drafts all the way from lifting roll to calender roll. A machine with calender roll and lifting roll as above, if geared to have a draft of 6 from back roll to front roll, would have a real draft from beginning to end of $6 \times 1.027 \times 1.02 = 6.28$.

In three processes the entire draft would be $6.28 \times 6.28 = 247.4$, whereas, if figured on the usual plan, it would be $6 \times 6 = 36$. This would be an error of about 14 per cent.,



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Cotton and the Lone Star State

The growth of Texas is remarkable. Its bustling cities and towns are constantly chalking up new records.

Texas topped all other states in the value of 1924 exports of merchandise. Government figures show that even New York's enormous exports were exceeded by nearly \$6,000,000.

Cotton explains the growth of Texas. Besides the state's vast production, there are nearly a quarter million spindles in operation. Her cotton factories have sprung up with great rapidity. More new mills are an early prospect.

The Lone Star State may in the future lead the nation in manufacture as well as production of cotton.

Chicago's Cotton Market has made possible trading in contracts for delivery at the world's largest cotton markets—Galveston and Houston. The great value of these contracts has already been proved.

Chicago recognizes the cotton predominance of Texas and visualizes a day that is to come.

Write or wire the Cotton Registrar, Chicago Board of Trade, for full details. Literature on the world grain market may also be had.

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and would produce a sliver about 14 per cent. lighter than calculated. This is but little better than guess work.

It emphasizes the necessity for always figuring the draft on any machine all the way from the point where stock enters the machine to the point where it is finally delivered.

77. The foregoing calculations all relate to frames equipped with leather covered top rolls. When metallic top rolls are used, many superintendents try to use the same calculations as with leather covered rolls, and using the same diameters as with leather covered rolls. This always figures out a greater draft than the actual result. The actual draft by weight is 6 to 8 per cent. less than is given by this kind of calculation.

This statement is exactly opposite the ideas of almost all superintendents, and some text books. But it is nevertheless true, as has been proven by a most careful series of experiments. Aside from the actual trials, theoretical reasoning leads to the same conclusions—as the following analysis will show:

Using the same train of gearing between back and front roll, as in the previous calculations, this draft would be 6 if back roll is $1\frac{1}{8}$ and front roll $1\frac{3}{8}$. But the metallic rolls, while of the same nominal diameter as the others, actually deliver more sliver per revolution, by reason of the meshing flutes, hence their equivalent or effective diameters are greater. If the front roll and back roll had the same kind of fluting, the effect on increase of diameter would be the same. But at the present time the front roll is made with finer pitch (32 per inch of diameter) than the back roll (16 per inch of diameter). This makes the increase of effective diameter less in front roll than in back roll.

The result on the draft is the same as if the back roll remained the same and the front roll were decreased in diameter. It is evident that this would decrease the draft. Hence, putting on metallic rolls, fluted as above will reduce the draft of the machine.*

78. The following table shows the usual fluting for frames on average Southern work:

FLUTING OF METALLIC DRAWING ROLLS.

Nominal Diameter	Flutes per in. of Diameter	Total Number of Flutes	Usual Position	Effective diameters to be used in Calculations for Production, Draft, etc.
1%	16	18	Back	$1.66=1\frac{2}{3}=10-6$
1%	24	27	2d	1.58
1%	24	27	3d	1.58
1%	32	44	Front	$1.83=1\frac{5}{6}=11-6$

Using the effective diameters in the above table, the draft from front to back roll would be

$$1.833 \times 48 \times 90$$

$$1.666 \times 40 \times 22$$

This works out 5.41.

We have seen that with the same gearing the calculation for leather rolls gives this draft 6, hence the metallic rolls decreased the draft in this case about 10 per cent.

*The prevalent opinion, that metallic rolls really increase the draft, is largely due to experience with metallic rolls which were made previous to 1898. These had flutings in the opposite way from the present ones; so that the effect of these early metallic rolls was to increase the draft, instead of decrease it, as with the present ones.

When a frame is geared for leather rolls, as in Fig. 20, the have a small draft besides. If metallic top rolls are put on, calender roll is speeded to take up what front roll delivers, and the front roll will deliver (as shown by the table) about one-third more stock than the other. Hence the calender roll must be speeded up in the same proportion. Assuming that this may be done by increasing the gear on front roll, in Fig. 20, from 24 to 32, the formula for the entire draft of the machine will be

$$\frac{3 \times 48 \times 90 \times 32}{1.66 \times 40 \times 22 \times 51}$$

This figures out 5.54.

We have seen that the calculation for leather rolls gives an entire draft of 6.16, hence the metallic rolls decreased the draft in this case about 10 per cent., the same as before*

The effect of metallic rolls on drafts is not uniform. It varies with character of stock and length of staple. The exact result must always be determined by experiment with the particular case in hand.

79. In changing an ordinary drawing frame from leather to metallic rolls, it is necessary to change the gearing between front roll and calender roll, in a way to speed up calender roll about 33 per cent. If there is a lifting roll behind the back roll, this must be speeded up about 47 per cent., and then the draft gear must be reduced 6 to 8 per cent.; that is, made 3 or 4 teeth less.

Production.

80. As shown in calculations for cards, production depends upon speed and circumference of delivering roll. This would be the calender roll. But the custom has become firmly established to calculate production of drawing frames from the front roll. This gives a result about 3 per cent. too low, but it is near enough for calculating production. The speed of front roll may be fixed at 250 to 450 revolutions, 350 being a good average for Southern work. The circumference of front roll is $1\frac{3}{8} \times 3.1416 = 4.32$ inches. At 350 revolutions it will deliver $4.32 \times 350 = 1512$ inches per minute or $1512 \times 60 \times 10\frac{3}{8} = 907,200$ inches per day of 10 hours or $907,200 \div 36 = 25,200$ yards. If sliver weighs 65 grains per yard, the weight will be $25,200 \times 65 = 1,638,000$ grains or $1,638,000 \div 7,000 = 234$ pounds. Expressed as a formula, the above calculation would be

$$\frac{1\frac{3}{8} \times 3.1416 \times 3505 \times 60 \times 10 \times 65}{36 \times 7000} = 234 \text{ pounds.}$$

This is for each delivery and for running every minute of the time. But it is usual to estimate 20 per cent. loss of time on a drawing frame. This would reduce the above amount by 47 pounds, and leave as a good day's work under these conditions 187 pounds. Ordinarily it is assumed that one delivery of drawing (in each process) will take the stock from one card. For example, if a mill has 12 cards, it would need about 12 deliveries of drawing in each process. If there are to be three processes of drawing, there should be in all 36 deliveries in the drawing frames.

The above calculations relate to leather covered rolls. If metallic rolls are used the production is about one-third greater for the same number of revolutions.

*This calculation of drafts, with the calender roll is such an obvious proposition, that it would be unnecessary to consume space with it, except for the fact, that some have erroneously supposed that the speeding up of the calender roll, to care for the increased production, had some effect on the draft.

(Continued next Week)

INDUSTRY'S CHIEF ASSET—36 Sizes MATERIAL HANDLING MINIMIZED

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Some one has misinterpreted the statement made in our June Advertisement that "For More Than Fifty Years We Have Had Practical Dyehouse Experience."

To avoid any further possible misunderstandings we wish to explain:

That this business was incorporated in 1891 by John H. A. Klauder and Leonard Weldon. These men were the pioneer builders of practical dyeing machinery and the earliest knowledge we have of their applications for patents was in 1882, some 43 years ago.

But prior to 1882, both men had built dyeing machines for their own use and it was the clash of their ideas in the Patent Office that induced them to go into business together and incorporate the present concern.

Back of this were many years of experience that enabled them to reach the positions they held in the industry.

In our possession are patterns and drawings, as well as equipment used by these men, and a personnel, some of whom were directly trained by them. It is, therefore, an actual fact that back of the present business there is a vast accumulation of knowledge and experience dating back more than fifty years.

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Duplan Silk Corp. —	Scott, Henry L. & Co. —
DuPont de Nemours, E. I. & Co. —	Seaboard Ry. —
E	Sellers, Wm. & Co. —
Eclipse Textile Devices, Inc. —	Seydel Chemical Co. —
Engineering Specialties Corp. —	Seydel-Thomas Co. —
Economy Baler Co. —	Siggers & Siggers —
Emmons Loom Harness Co. —	Sirrine, J. E. & Co. —
Entwistle, T. C. Co. —	Slip-Not Belting Corp. —
F	Sonoco Products —
Fafnir Bearing Co. —	Southern Ry. —
Fales & Jenks Machine Co. —	Southern Spindle & Flyer Co. —
Farish Co. —	Stafford Co. —
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Fournier & Lemoine —	Stein, Hall & Co. —
Ferguson Gear Co. —	Sydnor Pump & Well Co. —
Franklin Process Co. —	T
G	Terrell Machine Co. —
Garland Mfg. Co. —	Texas Cotton —
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Georgia Webbing & Tape Co. —	Textile Mill Supply Co. —
Graton & Knight Mfg. Co. —	Thomas Grate Co. —
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H	Tripod Paint Co. —
H. & B. American Machine Co. —	U
Hart Products Corp. —	United Chemical Products Co. —
High Point Loom Reed & Harness Co. —	U. S. Bobbin & Shuttle Co. —
Holmesworth, J. D. —	U. S. Ring Traveler Co. —
Hopedale Mfg. Co. —	Universal Winding Co. —
Houghton, E. F. & Co. —	V
Howard Bros. Mfg. Co. —	Victor Ring Traveler Co. —
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J	Washburn Printing Co. —
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Jordan Mfg. Co. —	Whitin Machine Works —
K	Whitinsville Spinning Ring Co. —
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WRITE FOR SAMPLES

Cotton Goods With Silk Effect

(Continued from Page 10)

Testing Theory Practically.

As it seemed to the writer that the fatty-acid crystal theory could hardly be correct, he thought it advisable to make a little experiment to determine whether or not his supposition was true. To this end he tried to produce a few crystals of a fatty acid on the cotton goods of such size that they were at least visible under a powerful microscope. An entire series of tests were made, and the goods were treated in many different ways.

For example, they were subjected to treatment with highly concentrated solution of soap at a boiling heat or at temperatures varying from that point to the atmospheric. The boilings lasted several days. The goods were kept in motion or else allowed to remain at rest. They were treated with acids of all kinds, concentrations, and for variable periods of time. Acids in the perfectly dry, dehydrated condition and wet with water were used. The treatment was carried out rapidly at high and the maximum temperatures, and slowly at lower temperatures, and in the open air as well as when there was frost on the ground. All these tests yielded but one result. No visible crystals were produced in any of the experiments.

Convinced of the inaccuracy and untenableness of the fatty-acid crystal theory, which is also contrary to pure chemical and crystallographic principles, the writer thought it advisable to look for another explanation of the phenomenon of the silk effect on cotton goods. The observations that have been made on the production of the silk effect as well as certain experimental tests served as a basis for the development of the new explanation of the phenomenon. It was seen under what conditions the most lasting silk effect was produced. It must be observed beforehand that the most pronounced silk effect is rapidly destroyed by the cotton goods coming into contact with water, but that the original effect is restored very frequently when the goods are dried again. This fact is probably well known.

New Explanation.

When the cotton goods are given a regular washing, then it is a very difficult matter for the effect to be restored in the same after drying, but when the washed goods are given an after-treatment with acid, the silk effect is reproduced. All the tests which the writer has made in the attempt to obtain a silk effect in cotton goods—an effect which is pronounced and of relatively long life—show that it is an essential condition that the utmost care must be taken to cleanse and purify the cotton materials as thoroughly as possible, whether this cleansing process be mercerization, bleaching, or repeated scouring and washing with water.

Then the goods must be given an hour-long treatment with soap solutions of high concentration. These solutions must be used both in the

(Continued on Page 34)

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The Work of the Bleacher

(Continued from Page 8)

cloth registered from the loom. The stretch normally exerted during bleaching gathers up as a rule the expected 5 per cent increase, but in doing so the small holes made by the templates at regular intervals near to the selvages, though certainly not very noticeable in the grey, become enlarged and noticeable to the extent of depreciating the value of the cloth.

There can be little real point when the cloth is intended for bleaching in piling up the weight of the cloth by the application to the warp of such bodies as china clay, magnesium and zinc chlorides, and paraffin wax or tallow to hold these together with the starch. We may be lenient towards merchant or manufacturer and assume that grey cloths containing these weighting materials were at first manufactured without any knowledge of what they were intended for. Be that as it may, the fact remains that in almost all cotton fabrics intentionally manufactured for subsequent bleaching there exist foreign bodies which hinder the course of bleaching foreign bodies that are applied in all good faith to the warp for the sake of good weaving.

Reference has been made to the weight of solid matter which has to be removed from the cloth by bleaching. It is obvious that any steps that can be taken are desirable towards decreasing the proportion of added matter, or at any rate towards making it more readily removable from the cloth. Dealing only with the so-called pure sizing, effected simply for weaving purposes, the flours and starches used are insoluble bodies, and the softening agents such as tallow, paraffin wax, and spermaceti are not saponifiable bodies. One might suggest that the most desirable improvements that could be made in the pure-sizing of warps would take the form of substituting a soluble starch for the insoluble, and an easily saponifiable fat in place of the non-saponifiable. It is true that the fats at present used are saponifiable in the chemical sense, but under conditions far too extreme to be applied on the large scale in a bleachworks. It is equally true that they are not readily saponifiable in the boiling alkaline solutions, containing about 2 per cent of alkali, to which the materials carrying these fats are submitted in the course of bleaching.—Manchester Guardian.

Southern Power Company Forced to Curtail

(Continued from Page 12)

duced by the company during this period has been generated in these steam plants.

"In spite of all of this, however, said Mr. Burkholder, "the situation has steadily become worse until immediate curtailment in the use of power is inevitable. The present situation is beyond the control of any human agency. And the protection of all of our customers

makes it imperative that we no longer delay putting the curtailment in effect. We are anticipating full co-operation from our customers. As a matter of fact nothing less will suffice."

Economy is Urged.

Utility companies and municipalities taking power from the Southern Power Company are expected to secure from their power customers the same co-operation that the Southern Power Company requests of the industries taking power direct from it, according to power company officers.

Owing to unsatisfactory conditions in the markets, the textile industry of the Carolinas has been operating generally on reduced schedules for several months. It was thought that the new policy of the power company will not cause any additional important industrial or economic disturbance, but rather only will require the cotton mills in numerous instances to revise their schedule of curtailed operations to meet the zone programs outlined by the power company.

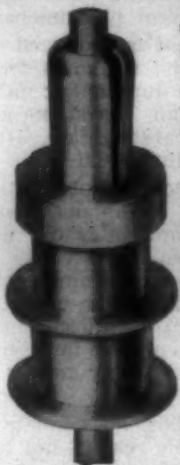
Arrange Chemical Exposition Program

The program of speakers for the intensive one-week course in chemical engineering fundamentals for college students, to be held in conjunction with the Tenth Exposition of Chemical Industries, September 28th to October 3rd at the Grand Central Palace, New York, is gradually nearing completion. Some of the leading authorities in their respective fields in the chemical industry and associated groups, will lecture at the Students' Course at the Chemical Exposition.

Three general addresses on the chemical industry, chemistry in all industry, and the buying and selling of chemicals will be given. Dr. Charles H. Herty, president of the Synthetic Organic Chemical Manufacturers Association will speak on "The American Chemical Industry"; Dr. Arthur D. Little on "The Application of Chemistry to Industry"; Williams Haynes on "Buying and Selling the Products of Chemistry".

Addresses on special phases of chemical engineering practice will be given as follows: "The Commercial Application of the Disintegrating Mill" by Pierce M. Travis of the National Homogenizer Corporation; "Separation of Solids from Liquids—Filtration, Grading, Classifying and Thickening" by Arthur Wright of the Filtration Engineers, Inc.; "Screening, Grading and Classifying" by Albert R. Reed of W. S. Tyler Company; "Handling of Materials—Intraplant Transportation" by A. E. Marshall of the Corning Glass Works; "Ceramics in the Chemical Plant" by Ross C. Purdy, secretary of the American Ceramic Society; "Heat Resisting Alloys" by Arlington Benschel of Victor Hybintette, Inc.; "New Developments and Operations in Thickening and Clarification" by Noel Cunningham of the Hardinge Company; "Liquids and Their Centrifugal Separation" by W. D. Cleary of the De Laval Separator Company; "Dryers and

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The speakers thus far represent about half of the finished program for the Studnets' Course, it being planned to add almost an equal number of additional well-known speakers before completion of the full program. A number of leading engineers have been scheduled tentatively, and definite announcement of their addition to the program will be made later. The Course is open to all college students in chemistry or chemical engineering, or others in the industry who desire to go over a one week's course in the fundamentals of chemical engineering. Lectures will be held each morning of the Exposition at the Grand Central Palace.

No charge is to be made to those who attend.

United States Imports of Wool Fabrics.

Imports of wool fabrics through the customs districts of New York, Chicago, Philadelphia, Rochester, and Boston, during July, totaled 2,279,000 square yards valued at \$2,019,000, according to the Textile Division of the Department of Commerce. This quantity is considerably larger than the imported during April, May, or June, and exceeded the monthly average for the first six months of 1925 which amounted to 1,930,000 square yards, worth \$1,850,000. Fancy woolen goods weighing over four ounces per square yard have each month comprised the largest group, and this item alone accounted for approximately one-half of the July total.

Preparations of Invoices on Dry Goods Shipments to Canada.

American exporters of dry goods are urged by the Canadian customs officials to exercise greater care in the preparation of their invoices; according to a report from Consul General W. Henry Robertson, Halifax. The Canadian customs regulations require that shipping documents shall show the name and address of the consignee, marks and numbers of packages and description of packages, and where goods are shipped in bulk, the number of pieces, bundles, etc., is required. The invoices shall show the marks and numbers on the packages in such a manner as to indicate accurately the quantities and values of the articles comprised in each exportation package, the packages to be legibly marked and numbered on the outside when of such a character as to enable such marks and numbers to be placed thereon.

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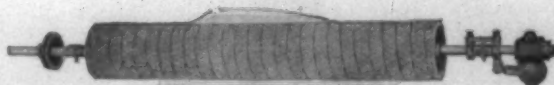
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FIG. 27

LANE Patent Steel Frame Canvas Mill Trucks

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Poughkeepsie, N. Y.

Cotton Goods With Silk Effect.

(Continued from Page 31)

cold and in the hot condition. There does not seem to be any great advantage gained by treating the goods in a boiling-hot soap solution. Any kind of neutral soap can be used. Whether it be a potash or soda soap does not matter.

After the soaping treatment, however, it is important that the goods are freed as far as possible from the adherent soap solution, before they are introduced into the moderately warm acid bath. In fact, it is of great importance that all the soap be removed, and this is accomplished by treating the goods in water baths at a temperature varying from that of the atmosphere or lower to such as the hand can barely stand. Then the centrifuged cotton goods are placed in the acid bath, which is made to best advantage with formic acid or lactic acid. The duration of the acidification process need be short only.

The Acid Bath.

Then the next step is to centrifuge the acidified goods and dry them thoroughly. A temperature of from 40 to 50 deg. C. is best for this purpose. In the acidification care must be taken that the concentration of the bath is not too low. But the acid bath can be used over again, after the necessary addition of a small amount of acid, if, as has been mentioned before, care is taken to see that every particle of soap and of soda as well is washed out of the cotton goods prior to their entrance into the acid bath. It is also evident that the organic acids used in this process must be absolutely free from any inorganic acid, as if any were present the well cleaned fibres would be quickly destroyed and the fabrics rendered brittle.

Colored cotton goods, with the exceptions mentioned, can be given the silk finish, but it must be remembered that in certain cases there will be some changes effected in the color by the strong soaping and acidification. Cotton goods dyed with sulphur dyestuffs behave particularly well, and take a fine silk finish by this treatment. In this connection it must be stated that not only must the dyeing process be carried out with great care, but the dyed goods must also be very thoroughly washed. If this is not done, the organic acids cause sulphuric acid to be formed either very quickly or after many months' standing, from the sulphide of soda that is still in the fibres. The ultimate result is that the goods gradually fall away into a powder. This happens most particularly with mercerized goods, which apparently are very difficult to deprive of their last traces of the sulphide by the regular washing process.

Conclusion.

The numerous experiments that were made by the writer, and the results that he obtained from them, have led him to the conclusion that the process of producing a silk effect on cotton goods causes a chemical change to take place in the cotton cellulose, and it may be

the soaps enter into a chemical assumed, perhaps with a great deal of certainty, that the fatty acids of combination with the cellulose so that it is possible to speak of a cellulose salt of fatty acids. This theory is explained and substantiated by the different phenomena:

1. The silk effect is produced effectively when the cotton is freed from all foreign impurities; after repeated thorough digestion and washing, after mercerization, after dyeing with sulphur dyes.

2. The silk effect cannot be produced on cotton cloths dyed with diamond black (aniline black) and other chromed colors, because in those cases the chromium enters into chemical combination with the cellulose to form cellulose chromate, which prevents the formation of cellulose salts of fatty acids.

3. Excess soap solution, adhering to the cotton goods, does not give any more favorable results, but has the effect of rendering the cotton goods more capable of absorbing atmospheric moisture as time goes on, which has the consequence of destroying the silk effect. This, however, can be restored after the cotton goods are thoroughly dried.

4. The silk effect is not diminished by continued mechanical friction but is intensified, as probably the fibres are crumpled together more strongly and expose more edges and corners, which when they move one over the other results in the familiar rustling sound of silk.

5. Finally, it is possible to produce a gloss on the cotton goods by the application of pressure. The character of this luster is entirely different from that which can ordinarily be produced in cotton goods by the common methods in general use.

Textile Bands Meet

Greenville, S. C.—All cotton mill bands in the state have been invited to play in assembly in Greenville, September 12 in the Parker High School auditorium, at which time it is expected that 500 persons will play in the bands. The announcement that the bands would play in Greenville was made in a communication from D. B. Chandler, of Newberry, secretary of the organization of textile bands of the state to L. P. Hollis superintendent of the Parker school district.

It was upon the invitation of Mr. Hollis that the band members decided to hold their meeting in this city. Aside from the individual playing by the bands, interest will center in the playing of the bands in a combined aggregation of 500 pieces.

Selections which will be played in unison were announced as follows: Billboard, march, by John Klorr. Oh, Katherine! Fox trot. Zampede, rag.

Sabre and Spurs, march by Sousa. All the foregoing numbers are published by Carl Fischer, Cooper Square, New York.

All bands are requested to secure the music and hold rehearsals before coming to the meet.

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Returning regular trains leave Washington 8:20 a. m., 11:00 a. m., 3:45 p. m., 7:00 p. m., 9:00 p. m., and 10:50 p. m.

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Cotton Goods

New York—The cotton goods markets were generally quiet last week. Buyers were conservative and were not inclined to operate beyond a moderate amount of business for spot and prompt delivery. Prices showed very little change. The uncertainty regarding the cotton situation made for hesitancy. The Government report due on Monday was given as the cause for light buying the latter part of the week.

Wide sheetings and print cloths have sold well through October by a number of the larger houses. Some sheetings have also been sold to the bag trade. Percales have been fairly active and there have been moderate sales of denims, tickings, and other coarse colored goods.

At the close of the week print cloths were quiet except for a fairly good filling-in business. Sales of print cloths were made for November delivery at 9½ cents for 33½ inch 64x60s. Spots and August deliveries were held at 9½ cents. The sheetings markets were soft and the amount of business done was so small that offerings made at lower figures created little interest.

Within the last three weeks, there has been a very goods business in fine combed goods. Voiles have sold to around 40000 pieces in some mills, with deliveries running fourteen weeks ahead. Broadcloths have been fairly well cleaned up and a larger business is expected next month.

The trade in tire fabrics continued rather quiet. There was some inquiry, but most of the business was for filling in purposes and involved only small amounts. In the cotton duck market, the chief feature was the question of deliveries, buyers needing goods for immediate delivery, but spot lots have been well cleaned up and there were only small lots left for immediate shipment. Prices continued firm with little change.

In cotton goods business has been going to the mills steadier than is generally supposed, particularly in the fine yarn division. There has been some late contracting in print cloths in the past two days. The wash goods lines shown thus far have attracted a great deal of flattering attention from buyers but orders have been small although widely scattered. Reports from the West and Northwest show that cotton goods distribution is distinctly better than a year ago. The business on styled printed lines keeps up very well.

The Fall River cloth market for the week showed less activity during the week just ended than for

some months past with the result sales have been held to approximately 35,000 pieces. The demand has been mostly for 36-inch low counts and twills and safeens with delivery extending through the next six weeks.

What little inquiry developed during the week was principally to know Fall River prices rather than to seek a basis for buying. In the 36-inch lines trading was reported in 20x12 at 2½, fair quantities of 22x18, 19,000 at 2¾, 24x20, 17,000 at 3¼; 32x28, 13,000 at 4; 36x32, 11,200 at 4½; 40x36, 9,650 at 5½, and 44x40, 8,500 at 6¾. Fair sized sales were also reported of 26x22, 16,000 at 3¼.

In the wide lines some 38½-inch, 64x60, 5,350 were reported sold at 10¼ cents. There is a limited quantity of goods on this construction on hand at this time as only one mill is actively engaged on them and another has a few on hand. Safeens have been rather quiet, after enjoying a fairly good call.

John V. Farwell Company, Chicago, say in their weekly review of trade: "Wholesale dry goods business continues to expand with the approach of school opening. Road orders show good gain in volume over previous week and corresponding week of last year. The ratio of volume to number of orders show wider divergence than during previous week, indicating broader commitments from retailers. Buyers have been in market in larger numbers during week. Collections continue fair."

Cotton goods prices were quoted as follows:

Print cloths, 28-in., 64x64s	7
Print cloths, 28-in., 64x60s	6¾
Print cloths, 27-in., 64x60s	6½
Gray g'ds, 38½-in., 64x64s	10
Gray goods, 39-in., 68x72s	10¼
Gray goods, 39-in., 80x80s	12¾
Brown sheetings, 3-yard...	13¾
Brown sheetings, stand....	14¾
Tickings, 8-ounce	23½
Denims	19
Staple ginghams, 27-in....	11½
Kid finished cambrics.....	9½a10½
Dress ginghams	13½a17½
Standard prints	9½

Kinds of Cotton Cloths.

United States imports of specified kinds of cotton cloth through the customs districts of New York, Boston, Philadelphia, Chicago and San Francisco, during July, 1925, totaled 4,044,000 square yards valued at \$1,129,000, considerable decrease from the monthly average for the first half of 1925 which was 10,800,000 square yards worth \$2,600,000.

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OF ST. LOUIS, MO.

P. H. PARTRIDGE, Agent, Charlotte, N. C.

Extra staples, and good 1-16 and 1¼ cotton from Arkansas, Oklahoma, and Texas, and Memphis territory.

The Yarn Market

Philadelphia, Pa.—The market for cotton yarns failed to show any change during the week. Sales continued small and confined largely to small orders for prompt delivery. There were a few sales of fairly large lots October and November delivery. One order for 20s two-ply carded warps being reported at 39 cents for November and December delivery.

While there were some offerings of spot lots at lower prices, spinners quotations were firm at prices which showed no change. Combed yarns were more firmly held. Stocks of these yarns are believed to be the smallest in years and Gaston county mills report that spinners are unable to get further supplies of long staple cotton before the new crop is available. Prices on combed yarns show considerable irregularity, with spot and nearby shipments bringing the highest figures.

The demand for carded knitting yarns was fairly active where small quantities were concerned. The total amount of business done in spot and nearby deliveries was moderately large, but there was only slight interest in yarns for future delivery.

Carded weaving yarns continued quiet, buyers ordering only small lots wanted for immediate shipment from dealers' stocks. Prices were slightly easier in dealers hands, although mills continued to hold firm.

The market showed a general tendency to wait for the Government crop report on Monday and for that reason buyers were almost completely out of the market by the end of the week.

Yarn prices in this market were published as follows:

Southern Two-Ply Chain Warps.			
2-ply 8s	39 a	2-ply 26s	45a45½
2-ply 10s	39½a	2-ply 30s	46 a46½
2-ply 12s	40a41	2-ply 40s	57 a
2-ply 20s	41 a	2-ply 50s	68 a
2-ply 24s	43½a44		
Southern Two-Ply Skeins.			
8s	37½a	40s	55 a56
10s to 12s	38 a38½	40 ex.	59 a60
14s	39 a39½	50s	67 a
16s	39½a40	60s	74 a
20s	40 a40½		
24s	42 a43½		
26s	44½a		
30s	45½a46		
36s	54 a		
Part Waste Insulated Yarn.			
6s, 1-ply	33 a	12s 2-ply	36 a
8s, 2, 3 and		20s, 2-ply	39½a
4-ply	34 a	26s, 2-ply	43 a43½
10s, 1-ply and		30s, 2-ply	46 a
3-ply	35 a		
Duck Yarns.			
3, 4 and 5-ply		3, 4 and 5-ply	
8s	37½a	16s	39½a44
10s	38 a38½	20s	41 a42
12s	38½a39		

Southern Single Chain Warps.			
10s	39 a	24s	43½a44
12s	39½a	26s	44½a
14s	40 a	30s	46 a
16s	40½a	40s	56 a
20s	41 a		
Southern Single Skeins.			
6s to 8s	37½a	20s	40 a40½
10s	38 a	22s	41 a
12s	38½a	24s	43 a
14s	39 a	26s	43 a
16s	39½a	30s	45 a
20s	41 a	40s	56 a
Southern Frame Cones.			
8s	37 a	22s	40½a41
10s	37½a	24s	42 a
12s	38 a	26s	43 a43½
14s	38 a	28s	44 a
16s	38½a	30s	45 a
18s	39 a	30s tying in	43 a44
20s	40 a	40s	56 a
Southern Combed Peeler Skeins, Etc.			
2-ply 16s	56 a60	2-ply 50s	80 a
2-ply 20s	58 a62	2-ply 60s	87½a90
2-ply 30s	65 a67	2-ply 70s	1 02½a
2-ply 36s	70 a75	2-ply 80s	1 12½a1 15
2-ply 40s	75 a80		
Southern Combed Peeler Cones.			
10s	48 a49	30s	60 a
12s	49 a50	32s	62 a
14s	49½a50½	34s	65 a
16s	52½a	36s	67 a
18s	51 a52	38s	69 a
20s	52 a	40s	70 a
22s	53 a	50s	75 a
24s	56 a	60s	87½a90
26s	56½a	70s	97½a
28s	57 a	80s	1 10a
Eastern Carded Peeler Thread—Twist Skeins.			
20s, 2-ply	50 a	36s, 2-ply	63 a
22s, 2-ply	51 a	40s, 2-ply	65 a
24s, 2-ply	56 a	45s, 2-ply	70 a
30s, 2-ply	59 a	50s, 2-ply	75 a
Eastern Carded Cones.			
10s	41 a	22s	44 a
12s	42 a	26s	51 a
14s	43 a	28s	53 a
20s	47 a	30s	55 a

Yarn Spinners' Bulletin

The weekly bulletin of the Southern Yarn Spinners Association says: "The market remains quiet with but little trading. Prices are at about the same level at last week. Caution appears to be the watchword of the market. Buyers are not making forward commitments, and spinners are resisting all endeavors to reduce prices below present levels. Underlying conditions of the market appear strong. The knitters are running fairly full time, and as they are not making any forward commitments it would appear that this fact alone would serve to strengthen the market. Speculation is conspicuous by its absence, and the market despite low price levels appears fairly stable.

Until the probable size of the crop is more accurately determined, we do not believe that any volume of business will materialize. Consumers will continue their hand to mouth purchases, and spinners their curtailment.

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One card grinder who has had experience on Smith and Furbush full roller cards. Give references and state price. R-P Yarn Co., New Haven, Conn.

Experienced Salesman Wanted

To represent a well known manufacturer of textile soaps and specialties. Must be thoroughly acquainted with Southern territory, reliable and honest. None but experienced man need apply. Write giving references, salary expected, ect. to J. M. S. Care Southern Textile Bulletin.

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We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT position as superintendent of small mill or assistant in large mill. Now employed as carder in large plant. Good references. No. 4684.

WANT position as manager or secretary of 5,000 to 10,000 spindle mill. Prefer Alabama, or state west of Alabama. Am well qualified and can give excellent references. No. 4687.

WANT position as second hand in carding in large room. Have had 20 years experience. Married, age 32 sober, musician. Prefer South Carolina. Good worker, know colored and plain work. No. 4688.

WANT position as overseer spinning or carding and spinning. Experienced man who can deliver the goods. Good references as to character and ability. No. 4689.

WANT position as overseer weaving, the Carolinas or Georgia. Now employed, but wish to change. Experienced on plain and fancy goods. Excellent references. No. 4690.

WANT position as overseer cloth room. Sixteen years experience. Now employed as overseer. Have family. Good references. No. 4691.

WANT position as overseer spinning. 20 years experience on all numbers and colors. Can come on short notice. First class references. No. 4692.

WANT position as superintendent of weave mill. Long experience in good mills. Understand economical production of quality goods. Prefer mill in the Carolinas, Georgia or Alabama. Special experience on ducks and chambrays. No. 4693.

WANT position as overseer weaving on plain cam weave. Have been overseer for four years. Married. Good character, good references. No. 4694.

WANT place as overhauler in card room. Can give excellent references from mills in which I have done this work and can give satisfaction in every respect. No. 4695.

WANT position as overseer carding or assistant superintendent. Prefer mill on white goods. Age 26, single, 9 years experience. Now overseer and night superintendent. No. 4696.

WANT position as master mechanic. Now employed, good reasons for wishing to change. Large job preferred. Good references. No. 4697.

WANT position as overseer weaving. Practical experienced man of good character and habits. Best of references. No. 4664.

WANT position as superintendent or manager. Prefer weave mill on duck, drills or osnaburgs and similar fabrics. Now employed. Long experience in all departments of mills. No. 4665.

WANT position as overseer spinning or twisting; 12 years experience. Now overseer spinning, spooling and warping at night. Would take place as second in large mill. No. 4666.

WANT position as overseer spinning. Age 37, married, 25 years in cotton mills, 10 years as overseer, have run present job 4 years, wish larger place. No. 4667.

WANT position as superintendent or assistant, or spinner in large mill. Experienced man of ability and character and have excellent past record. No. 4670.

WANT position as superintendent of small mill or assistant in large mill. Now employed but wish larger place. Best of references to show ability and character. No. 4684.

WANT position as superintendent of small mill or assistant in large mill. Now employed but wish to change. Long experience. No. 4655.

WANT position as overseer carding or spinning. Long experience in both rooms and can get fine results. No. 4662.

WANT position as superintendent of yarn or weave mill. Thoroughly reliable and practical man. Excellent references. No. 4659.

WANT position as overseer carding. Have had 10 years as second hand, three as night carder. Good references. No. 4660.

WANT position as overseer. Long experience as second hand and qualified to work as overseer. Age 41, married, good habits. No. 4668.

WANT position as overseer carding and spinning. Not less than \$42 weekly. Age 40, have been in mill 32 years, technical graduate in carding spinning and weaving. Would like opportunity to show proof of my ability and character. No. 4669.

WANT position as superintendent or assistant. Can furnish references from all former employers, including some best mills in the South. No. 4671.

WANT position as carder or second hand in large mill. Young man but have had good practical experiences. No. 4672.

WANT position as overseer weaving. Long experience on wide variety of goods and can get quality and quantity production. No. 4673.

WANT position as machinist in mill or textile shop. Have had 7 years experience as mechanic and thoroughly under textile machine work. No. 4674.

WANT position as superintendent, assistant superintendent, carder, or salesman. Prefer salesman's place. Special experience in analyzing and testing fabrics. Good references. No. 4675.

WANT position as master mechanic or chief engineer in mill with electric power. Long record of satisfactory service and can deliver the goods. No. 4676.

WANT position as cloth room overseer. Have had 14 years experience on plain and fancy goods. Best references. No. 4677.

WANT position as overseer weaving or of cloth room. Have held present job in colored goods mill for 12 years. Best of references. No. 4678.

WANT position as overseer cloth room. Three years as overseer on wide and narrow drills, sheetings and colored work. Now employed good reference. No. 4679.

WANT position as overseer weaving. Reliable and competent weaver of long experience on wide variety of goods. Best of references. No. 4680.

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WANT position as carder, spinner, also experienced in spooling, winding twisting and warping. I. C. S. graduate. Age 35, can, come on short notice. No. 4682.

WANT position as carder or spinner. Have been overseer in both departments and also experienced as assistant superintendent. Best of references. No. 4683.

WANT position as overseer carding or second hand in large room. Now employed, but wish better place. Good references. No. 4681.

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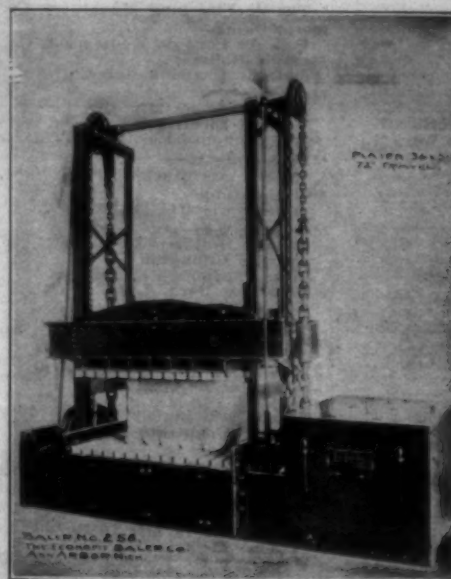
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Press maintains its maximum pressure indefinitely, until released. Unlimited compressing platen stroke. In other words, platen will travel as low as is necessary to completely compress the bale, regardless of the third dimension, as the platen can go down to within four inches of compressing platform. Entirely self contained, requiring no cement foundation, pit,

over head counter-shafting, chain connections, etc.

Chains are hand forged Swedish steel. Will stand over 50 per cent over load, a greater load than can be exerted by the motor pulling up to 40 H. P. torque.

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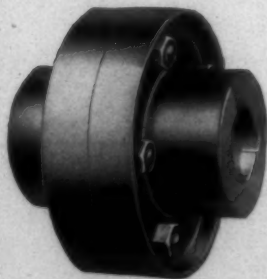
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